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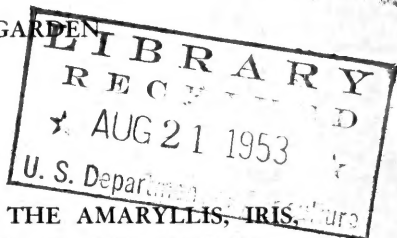
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BULBS FOR POTS

120

AND FALL PLANTING IN THE GARDEN



A CATALOG OF THE BULBS AND PLANTS OF THE AMARYLLIS, IRIS, GERANIUM, ORCHID, GESNERIA, AND OTHER PLANT FAMILIES,
AND MANUAL OF CULTURE.

Many Reduced Prices. New Items Listed.
A Personal Letter,—to You.

FALL 1953



CECIL HOUDYSHELE

1412 Third St.

La Verne, Calif.



Librarian
U.S. Dept. of Agriculture
Washington 25, D.C.

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A PERSONAL LETTER — TO YOU

Dear Floral Friends,

Before getting down to the business of selecting our Bulbs, African Violets, Orchids or other plants, let us (as usual) philosophize a little, together. I believe that it does most of us good to search into the reason and nature of things and to come to conclusions about what is favorable and what is unfavorable in relation to our own personal happiness.

George Horace Latimer, late Editor of the Saturday Evening Post, once said: "It is good to have money and the things money can buy. It is good also to check up and make sure you have not lost the things money cannot buy. Among these more valuable things that money cannot buy are health, good conscience, friendships, good reputation, the knowledge of service to others. All these add up to a greater contentment than the bank account can give."

I will commend these words to all good people. Sometimes the best of us forget our ideals. But there are greater values than money that cannot be expressed by any numerals preceded by a dollar sign.

There is wisdom in these words for salesmen, many of whom are more concerned about the volume of their sales than they are about the ultimate satisfaction of their customers. They need to remember the Golden Rule and to realize that when one sells an item that gives satisfaction to his customer, he has made a friend and acquired a customer who will come again. There are prospective customers too who need to apply the same rule, but on that point I should not expatiate because I do not mean you or any one who would read this far in this letter.

One good quotation deserves another. Since I've made such a start I may as well continue. Have you ever read William Henry Channing's "My Symphony"? If not, you should, and here it is:

"To live content with small means;
To seek elegance rather than luxury and refinement rather than fashion;
To be worthy, not respectable, and wealthy, not rich;
To listen to stars and birds, babes and sages with open heart;
To study hard;
To think quietly, act frankly, talk gently, await occasions, hurry never;
In a word, to let the spiritual, unbidden and unconscious, grow up thru the common.

This is My Symphony."

Our President, a few months ago, quoted the fourth paragraph of the following. The entire article is worth cogitation by all of us and especially by those beyond middle life.

It is true that life brings many disappointments and many sorrows along with the many blessings. Let the old be reassured that,—

Youth is not a time of life; it is not a matter of rosy cheeks, red lips and athletic bodies; it is a temper of the will, a quality of the imagination, a vigor of the emotions. It is a freshness of the deep inner springs of life.

Nobody ever grows old by merely living a number of years; people grow old by deserting their ideals. Years wrinkle the skin, but to give up enthusiasm wrinkles the soul.

Whether seventeen or seventy, there should be in every being's heart the love of wonder, the sweet amazement of the stars, the undaunted challenge of events, the childlike appetite for what comes next, and the joy in the game of life.

You are as young as your faith, as old as your doubt; as young as your self-confidence, as old as your fear; as young as your hope; as old as your despair.

So long as your heart is attuned to receive messages of beauty, hope, cheer, courage, grandeur and strength from nature, from men and from the Infinite, you are young.

You are still young when you arise in the morning, joyfully anxious to accomplish something, to give something to the world about you, to serve.

But when the snows of pessimism and the ice of cynicism infiltrate your soul, then you have become old indeed and probably useless as well.

My apologies are due to the unknown author of the above. I cannot use quotation marks as I have changed some portions to better fit my own ideas and my own way of expressing them, but with no claim of improvement.

Now, we should talk a little about Gardening and Gardeners. There are two kinds of gardeners. Most of us are gardeners principally because we love plants and especially flowers. Therefore we grow them. But there are a few whose primary motive is to collect. Both motives are good but the love of flowers (or plants) should be in the ascendancy.

The kind who most of all loves flowers, likes to give flowers. He is always giving them to others. The purely collecting sort of gardener always wants to have more than any one else. He is not anxious to share his own but he will beg them from you. When he visits a garden, he may be inclined to add to his collection in a way that is not orthodox. He will sometimes bear watching. But not always. Even the average collector is honest. It is just a few who will acquire the leaf cuttings of your African Violets if you turn your back, or your prized seed pod.

Let us find our pleasure in growing fine flowers and in sharing them with others. Gardening is good exercise for the body, the mind and even for the soul.

Our interest is not merely to sell you plants. We do not want to sell a single item to any one who is unlikely to be able to derive benefit from it. Naturally we do need a large volume of sales in order to remain in business. But we do not want this for the mere profit.

In order to serve you better we would like to point out a few facts and a few of our items. Note please that we are lowering many prices. Especially note our prices of Anthuriums which are much reduced. Only the few plants or bulbs that we must buy and pay a higher price for are up a little. In many cases we have paid more but sell at the same price. Books and Supplies are not advanced in this catalog but they have been advanced in recent years as a result of the increased cost of labor and materials.

One of the oldest and most satisfactory bulbs for pots or for the outside garden in mild climates is the Amaryllis. Our grandmothers grew them and their grandmothers before them and often the grandfathers. But they did not grow the modern types. The world makes progress and modern Amaryllis are much finer than those of even 50 years ago.

Prominent in the breeding of plants is the famous wholesale nursery of Howard and Smith, of California. We are proud to offer their Amaryllis under our name of Select Strains. Only a few from other sources have been included under this classification and a few of them are our own seedlings produced by crossing Howard and Smith's with other strains, including imported Dutch Amaryllis. Our prices remain the same but our profits are a little less.

By spring we expect to list a few of the Royal Dutch Strain, the very best from Holland. If the Dutch Amaryllis are dug too early in order to compete with American grown bulbs for fall sales we are inclined to fear that results may be unfavorable. We have tried it a couple of times.

We therefore decided to wait for late dug bulbs and to list them in the spring. We have imported a few thousand Dutch Amaryllis at various times. We have had the

Royal Dutch, Van Tubergen's and others. In our trials we found Royal Dutch to be easier to grow than the others. We still have a few in an outside planting where they have been growing for several years.

It is only our opinion also when we say we believe that they are the most perfect examples of the true Leopoldi type that have so far been produced.

If you enjoy crossing plants and growing the resulting seed I suggest that you purchase one or more Royal Dutch and several Select Strain bulbs, say one dozen. Do not force the Select Strains for early flowers but wait until the Royal Dutch have arrived, been potted and allowed a bit of time to become rooted. Then start them off at about the same time. A few flowers should coincide with the Royal Dutch. Pollinate the Select Strains with Royal Dutch. The resulting bulbs will be hardier than the imported bulbs. They are usually about equal in hardiness and in the quality of being easy to grow to the better class American strains. Some of them will produce the finest Amaryllis flowers you ever saw.

I have the information, it could be only a rumor, that Flower Grower plans to publish an article on Amaryllis in a future issue. Altho I have been growing Amaryllis for more than 50 years, I will admit that I am looking forward to this article. I hope you will watch your newsstand and purchase the issue containing the Amaryllis article. But still better advice is, send in your subscription at once to Flower Grower, 99 N. Broadway, Albany 1, N. Y., with a check or money order for \$3.00 for one year or save \$1.00 on a two years subscription, which you are sure to want, and send \$5.00 for two years.

A thing that is close to my heart is to note the growing popularity of *Crinum Cecil Houdyshel*, the origination that won for me the Herbert Medal.

The first trial of this crinum, after my own, was made by the famous nursery of Reasoner Bros. at Oneco, Florida, who approved it and bought stock.

The most recent was made by Jack Romine of Independence, Mo., near Kansas City. He found it hardy in below zero weather and confirmed my claim to its everflowering tendency. Mr. Romine has written a few articles about it in the Kansas City Star.

Few plants are true ever-bloomers but extra large bulbs of our hybrid, after they are well established, will often give 8 or 10 scapes of flowers and up even to 13 in one early spring to late fall season.

The bulb has been reported hardy at Brooklyn, in Pennsylvania, Oklahoma, and of course everywhere in the upper south.

For that reason we have had some very large jumbo bulbs dug. I believe every one will weigh from 4 to 5 lbs. We are pricing these at \$6.00 each. They will take a lot of postage. If you will plant in a hole deep enough that the top of the bulb is just above the soil surface, then when cold weather arrives, mulch heavily with straw, we will guarantee them to survive your winter. If they do not we will either replace with another bulb or your choice of any bulb or plant items you select from our catalog. Thus you cannot lose.

One of the most beautiful bulbs in the gardens of the deep south is *Lycoris aurea*. Unfortunately it is the least hardy of this genus and cannot be grown as far north as several of the others. But it can be grown successfully in pots. The other *Lycoris* are equally desirable and most of them can be grown in the outside garden as far north as Tenn. or Va.

Never before have you had the opportunity to purchase so many fine species as we list in this catalog. Nor have they ever before been sold at such low retail, postage prepaid prices.

The bulbs we offer are California grown and hence more likely to succeed for you than the imported bulbs. We are able also to offer a few 1953 imports of hard to get species. Some have never before been listed in American catalogs. Very likely you may have to wait until next year to see their flowers.

Saintpaulias, African Violets, continue to be the most popular of all house plants. Close to one-half of our total sales volume is for these plants. We carry all of the Ulery introductions and the best from all other sources. Part of our success in handling these

plants is due to the fact that we are able to ship them long distances and to guarantee them to arrive in a living condition. We aim to have them arrive in a perfect condition and they usually do. Plants sent to Europe by Air Parcel Post arrived in perfect condition, in bloom and continued to bloom after arrival.

Of course, on long distance shipments, they must travel by Air Parcel Post. Our offer of a **Starter Collection** of five varieties for \$4.00, postpaid, should interest the beginners. Remember, these are "our choice," not your selection from the plants we list. But you can tell us what you have and we will not duplicate if your list is not long. If you want them by air mail, send the estimated postage.

Accidentally we omitted the listing of **Alstroemeria Seed**. Price 50c per packet. All seed are guaranteed to grow and if you fail you may claim a credit on your next order.

There are many other items to make life more beautiful thru the winter days in the north and to adorn your fall, winter and spring gardens outside in both north and south. Even the inexpensive *Oxalis* will give you great pleasure and will brighten dreary winter days, tho on dark days you may have to turn on the lights to make them smile at you.

We wish for you all many flowers and great success in growing them along with good health and serenity of mind and spirit.

Sincerely,

Cecil Houdyshel

TERMS AND INSTRUCTIONS FOR ORDERING

Read and follow these instructions. It will save you time, money and misunderstandings. It will save us from writing many letters to correct misunderstandings and errors.

Prices in this catalog cancel all former prices. They are for one bulb unless otherwise stated. 12 bulbs are sold for price of 10 or 6 for price of 5. 100 bulbs for price of 70 unless noted. Books, garden supplies and plants take no quantity discounts. California customers must add 3% Sales Tax.

Remit in advance, in full, by check or M.O. No C.O.D. No charge accounts carried. Nothing reserved unless paid for in full. These terms reduce our expenses and lower the costs to you. Checks and M.O.'s must be payable to Cecil Houdyshel to fit our endorsement stamp. Stamps at face value accepted for small sums only. For over 50c send 5% extra.

Postage. Rates this season have been up 50%. There will be another large increase on Oct. 1., and legislation to increase again is in our near future prospect. Yet, we have not increased prices except on items we buy for resale. In fact, this catalog lowers some prices, in the hope for a greater volume of sales. We prepay postage on orders of \$1.00 or over unless otherwise noted. On orders under \$1.00, send 15c extra. We will still prepay after Oct. 1, but if you wish to send a little extra for the increased cost of postage, it will not be refused. For seed orders, send a self addressed, stamped envelope, please.

Insurance up to \$5.00, costs 5c extra. \$5.00 to \$10.00, 10c. \$10.00 to \$25.00, 15c. Over \$25.00, cost is in proportion to \$25.00 value rate. Postal insurance covers all except freezing in transit. Only Express covers freezing. **Special Handling** costs 15c up to 2 lbs. 2 to 10 lbs., 20c. **Special Delivery** is better as it also speeds delivery and is handled more carefully. We are not responsible if plants are not immediately taken indoors. Up to 2 lbs. costs 35c. 2 to 10 lbs., 45c. Over 10 lbs., 60c.

Each fee, Insurance to Special Delivery is for one package only.

Order blanks. Make your own. They should not be in letter form as this makes it difficult for packers. Place one item only in a line, in this order: 1. Quantity ordered. 2. Name of item but not description. 3. (In column on right) price of item. Below add other extra expenses like sales tax, insurance, etc.

A letter that requires an answer, when included with order, is referred to me and will likely cause delay of delivery. I am often a month behind with correspondence.

Wholesale. We give no discounts to dealers. There are several items we can supply wholesale. Send your want list and we will give best quantity prices.

Foreign Orders. If postage exceeds that to our 8th postal zone we charge the excess. Include a little extra for excess postage. **Canadians** should apply to Sec. of Destructive Insect and Pest Act, Advisory Board, Ottawa, Ontario, for Permit and labels and send with order. Many Latin American countries have laws governing importations. Be sure to inform yourself and act accordingly. Ask your Postmaster. Usually only a permit is needed.

Partial Shipments are made if bulbs are not all dormant at same time. We deliver everything within the season for correct planting.

We guarantee our bulbs to be true to name and healthy and replace them if not. If you follow our directions in this catalog, they will grow and flower. We cannot assume responsibility if you do not. Such a guarantee usually means that the expense of replacements is spread over the entire sales and everyone pays more for the plants. Everyone fails sometimes and we try to learn from our failures. As necessary culture directions are in this catalog, we send none with bulbs and other plants.

Catalogs. Spring Catalog mailed Jan. 15. Fall Catalog, Aug. 15, or soon after. If you do not send us your orders your name is dropped from our mailing list. If not interested, please refuse catalog or ask P. M. to return at our expense.

All **Catalogs** and **Price Lists** are priced at 10c because of increased cost of printing and of postage. Please do not ask for free copies for yourself or friends. One dime places you on our mailing list and you then receive catalogs as long as you send orders for \$1.00 or more each year.

We ship to every state and territory and to every continent. Calif. bulbs and plants do well, everywhere.

General Culture Directions

Rich sandy loam is the best soil. But if too sandy, it may lack fertility. It will require more rainfall or irrigation. The ideal garden soil will contain sand, clay and humus. Some plants, like Bearded Iris do best in a heavy soil. Plants of this nature seldom if ever like shade or acid soils and deep drainage is not so necessary. Some plants, like Gloriosas must have deep sandy soil. Probably most tuberous plants prefer quite sandy soil.

All soils require the addition of much humus. Compost all garbage, weeds, leaves, cut branches and manures. When rotted, add to soil and thoroly mix.

Fertilizers. We recommend only animal manures, compost and commercial fertilizers that are of organic origin such as Spoonit, listed in this catalog. In the outside garden fresh manure can be used on most plants that are growing vigorously as a very light mulch, but after flowering. Too much fertilizer before flowering may almost or wholly stop the flowers. When the growth of a plant becomes abnormally rapid it is unlikely to flower or produce fruits.

Do not fertilize a plant in dry soil, or use any fertilizer (unless thoroly rotted in a compost heap) in the soil before planting bulbs, seeds or plants. Water lawns, trees, and plants well the day before applying fertilizer and again a few days after application. Do not fertilize a sick plant in order to make it well. You are more likely to make it worse or even kill it. Small plants and seedlings should not have too much either. Lush, rapid growth may be weak and "flabby." Sturdy growth with firm structure is better. Chemical fertilizers should be used with much discretion if used at all.

Compare plants with people. Both are living, organic beings. Air, water and food are necessary to their growth and health. But one does not give babies beefsteak, fried potatoes, apple pie and a cup of coffee. Nor is this a good diet for an invalid or an ill person, however good it may be for one in vigorous health who performs hard physical labor. Nor should plants be over-fed or fed at all if sick or thirsty. But since one cannot add much rich food when potting a bulb, very good results may be obtained by a monthly

feeding of very weak liquid manure, color of very weak tea. A more convenient way is to use Spoonit, which we list under Garden Supplies.

After blooming, many neglect their bulbs. As a result the bulbs do not flower the following year. For success one must continue to give good culture. This is the time to fertilize, irrigate and cultivate frequently, until yellowing foliage indicates the bulb is becoming dormant. During this growth period next year's flower buds are formed.

Depth of planting and distance apart often cause too much concern. Bulbs usually have sufficient adaptability to do well under widely varying conditions. If left in one place a few years, most bulbs adjust themselves to their preferred depth. Approximately, bulbs should be about 2 or 3 times their diameter apart unless their habit of growth is spreading—like *Ranunculus*. In such cases plant farther apart. Bulbs as large as Daffodils may be 4" to 6" deep. Bulbs with a heavy erect stem need deep planting in order to remain erect. Plant deeper in light sandy soils than in heavy soils and in cold climates to protect them from frost.

Pests. Snails, slugs, ants, mealy bugs, thrips, aphids, leaf hoppers, mites, red spider and scale are among the most serious pests in the garden or on house and greenhouse plants. They must be controlled.

See our listing of **Insecticides** under **Garden Supplies**.

If you do much garden work and end the day too tired, you owe it to yourself to use our light weight plastic and indestructible garden hose. See the listing. It is the most economical of all.

Acid and Alkaline Soils. Most plants thrive in mildly acid, neutral or mildly alkaline soils. But others do not have so wide a range of tolerance. Rhododendrons, Azaleas, Camellias, Gardenias, Zantedeschias, Caladiums (and other members of Arum family), Nerines, Haemanthus, Gloxinias, Begonias, Orchids and most shade loving plants require an acid soil. Some like *Gladiolus* prefer mildly acid to neutral soils; Bearded Iris do best in neutral to alkaline soils. The acid-alkali balance depends upon the concentration of hydrogen ions in a saturated solution. This is expressed in pH units. pH 7 is neutral. Below that the acidity increases; above it the alkalinity increases. For the mathematical, I will explain that the numeral is the negative logarithm denoting the concentration of hydrogen ions in gram atoms per liter.

In regions having heavy rainfall, excess alkali is usually dissolved and carried away by the runoff. Semi-arid regions usually have alkaline soils. Calif. soils usually have too much unless cover crops or applications of humus, which are acid, have lowered the pH. I am told that Texas soils are sometimes too alkaline. The remedy is obvious. Apply humus, ground phosphate rock, or small, even applications of sulphur. Improve the drainage.

Potting Directions. Use clean pots of the right size, neither too large nor too small. A 2½" *Amaryllis*, for example, needs a 6" pot. A 1½" *Eucharis* needs a 5" pot. Small bulbs like *Ranunculus* or *Achimenes* may have 3 to 5 in a 5" or 6" pot. Cover the hole at bottom with a piece of broken pot, concave side down. Above this place small pieces of broken pot and gravel. This helps to drain away excess water. Over this drainage material we usually place a handful of sphagnum moss to prevent the soil from sifting into and clogging the drainage material.

The drainage must be perfect and it is essential that the soil above this drainage be of a friable texture that permits water to pass thru freely.

The best soil is a rich sandy loam with the addition of plenty of humus. For humus one can combine or use singly, peat, sphagnum and rotted leaf mould with old rotted dairy manure well broken up and rubbed thru a screen of smallest gauge. For most plants the proportion can be ⅔ sandy loam, ⅓ humus.

Basketing. Vining or pendant plants like *Achimenes*, *Aeschynanthes* and several of the other Gesneriaceae, *Begonia Lloydii*, *Ceropegias*, etc. look best and do best in our wire baskets, altho they can be grown in pots, suspended by the "Snap-on" pot hangers. Wire baskets allow perfect drainage and we prefer them also for some orchids like *Laelias*. We offer the best wire baskets made. Painted wire baskets soon rust out. Ours are galvanized, polished, not soldered but welded.

Place a thick layer of wet sphagnum on bottom and sides of basket. It should be well compressed and at least 1" or 2" thick. For the center one can use a mixture of peat, leaf mould and sand,—or any soil formula favorable to the plant. For certain Orchids, Episcias and sometimes other plants, we use only sphagnum thruout.

Fertilizers. Many advise the addition of fertilizer to potting soils. We never use any except the rotted dairy manure and leaf mould and sometimes a tablespoon of bone meal. If new roots come into contact with much fertilizer they are burned. Commercial fertilizer is especially a hazard. A potted dormant bulb, seed or plant must be babied to the extent of giving only a light diet. A rich, full meal will often cause failure. We prefer to get them well started and growing and of some size before adding more fertilizer, if any. The chief food of plants is carbon dioxide taken from the air thru the foliage. Water, nitrogen and minerals come from the soil.

When bulbs are well rooted, liquid fertilizer can be used once a month. Weak liquid manure is excellent but not quite as well balanced as Spoonit.

For the starting temperatures and further culture of the plants please read the culture advice given with the listings.

Sources of Further Information. Please note our **Garden Reference Books**. Join local garden clubs. Subscribe for as many garden magazines as you can. We especially recommend Popular Gardening, Dept. H, 90 State St., Albany, N.Y., and Flower Grower, Dept. H., 99 N. Broadway, Albany, N.Y. We are charter subscribers of both. I suggest you buy copies of each at your newsstand. You will probably then subscribe for both of them.

GARDEN REFERENCE BOOKS

Bailey's Cyclopedia of Horticulture. This 3-vol. set of over 3,600 pages describes almost every cultivated plant and has a wealth of culture information. On Orchids alone, this work is most valuable for its descriptions and culture instructions for almost every orchid in cultivation. The same is true for all types of bulbs, plants, shrubs, or trees. Price \$40.00. It is the most monumental work in any language on the entire field of Horticulture. It is an ideal gift for a plant lover.

Hortus Second (Bailey). A concise Dictionary of Gardening. This 778-page volume lists and describes nearly every plant offered in catalogs, and some that are not in the Cyclopedia of Hort. It contains only a few culture hints. Both works should be in every garden library. Price \$10.00.

The above publications are subject to price changes, without notice, by the publishers. In the case that prices again rise on these or any books listed here we will notify the customer. The customer may then accept or cancel order.

A Southern Garden, by Elizabeth Lawrence, a handbook for the Middle South. A most useful handbook for all gardeners, north or south. Bulbs and all garden plants. 251 pages. Price, \$3.00.

Enjoy Your House Plants. Excellent handbook of window gardening by Dorothy Jenkins and Helen Van Pelt Wilson. 238 pages. Price, \$3.00.

American Orchid Culture. Edward A. White. This is a complete handbook of American Orchid Culture for both commercial and amateur growers. Most interesting accounts of Orchid hunting trips, in many lands, are related. 14 beautiful color plates and many other illustrations. A beautiful, interesting, useful book. 276 pp., \$6.00.

Greenhouse Gardening For Everyone. Ernest Chabot. Important factors are noted, including correct temperatures for forcing plants, bulbs, and orchids. 266 pp., \$4.00. If you have a greenhouse, this is a necessity.

How To Grow Rare Greenhouse Plants. A new book on greenhouse gardening by Ernest Chabot. Complete directions for greenhouse culture of 260 rare plants. Being non-professional or amateur, Mr. Chabot knows best an amateur's problems and how to advise him. Everyone having a greenhouse should have both books. 182 pages. Illustrated. \$4.00.

Geraniums, Pelargoniums, by Helen Van Pelt Wilson. 248 pages, 7 color plates, many drawings and illustrations. Best book on this subject. \$3.95.

Tuberous Begonias, by Worth Brown. Mr. Brown is one of our most important hybridizers and wholesale growers. His book is a complete guide for the successful growing and propagation, outdoors or as house plants. 128 pages, illustrated. \$2.75.

Bulbs For Beauty. Charles H. Mueller. 296 pages, illustrated. Experienced gardeners will gain new information about bulb culture from this book. Price, \$3.50.

How To Grow Orchids. By Cecil Houdyshel. A 12-page pamphlet, no illustrations, carefully explains requirements of easily grown orchids. Price, 25c.

How to Grow Cattleya Orchids and a few others is told briefly in our 1949 Orchid Price List. The listings are now all cancelled. Price, 15c.

The Complete Book of African Violets. By Helen Van Pelt Wilson. This is completely new and gives best information on hundreds of varieties. 29 Saintpaulias are shown in full color. 256 pages, fully illustrated. \$2.95.

How To Grow African Violets. By Carolyn Rector. 94 pages, paper-board covers. Illustrated. How to pollinate, hybridize, grow from seed or leaf cuttings, prepare soils, control pests and diseases, groom plants for show, etc., by a real grower. \$1.35.

Trees For American Gardens, by Dr. Donald Wyman of Arnold Arboretum. Illustrated. 376 pages. If interested in the most beautiful trees and the proper ones for your conditions, you need this book. \$7.50.

The Book of Trees. By Alfred C. Hottes. 200 illustrations. Everyone loves trees and this book describes all worthwhile trees, their stories, uses, culture; historical trees; lists for every situation. Mr. Hottes knows trees and writes in a charming style. 440 pages. \$4.00.

The Wise Garden Encyclopedia. By a group of American authorities. Edited by E. L. D. Seymour. 1,380 pages. Profuse illustrations. 64 pages in color. Price, \$5.00.

A to Z On Fuchsias. 136 pages. Cloth bound. Illustrations, some in color. 700 varieties described. \$3.00.

Garden Supplies

Postage Extra is necessary on several items below. The weight when packed is given on these items. It is clearly stated that you must send the postage when you order. Many do not and we must write for it. Here is how to find it. We are very near Los Angeles. Call your P. O. and ask the cost of postage on the packed weight given from your P. O. to Los Angeles and send us that amount.

If your shipment goes by express, no postage is due. But the minimum cost of an express package is now \$1.61, any weight, any distance.

Snail-Kil Pellets. 1 lb., 45c, plus postage for 2 lbs. Two pounds, 75c, plus postage for 3 lbs.

Ant-B-Gon. Set of 4 filled dispensers, 75c, plus postage for 1 lb. Refilling liquid, 4 oz., 40c postpaid.

Volc Oil Spray, for outside plants. Kills mealybugs, scale, red spider, etc. Don't use on orchids, saintpaulias, or most house plants, palm trees or ferns. Fine to clean up your shrubs, trees and most outside plants. 4 oz., 50c postpaid.

Thrip O cide. Contains D.D.T. Kills thrips on Gladiolus or other plants, Scale on Orchids. 4 oz., \$1.20 postpaid.

Vio-Vim, a Fungicide and Bactericide for African Violets. 75c prepaid. Its effect is apparent in the stimulated growth of the plant.

Wonder Garden Spray. Spray as directed for cyclamen mite, mealybug, red spider and other pests. \$1.10 prepaid.

We assume no risk for results with insecticides.

Spoonit is the fertilizer we use on African Violets and other house plants. It is equally good on outside plants. Analysis: nitrogen 18%; phosphoric acid 18%; potash 14%. To use, dissolve level tablespoon in a gallon of water. It never burns. Apply once a month. Give transplants half strength. 6-oz. package, 50c, plus 8c postage; 24 oz., \$1.25, plus postage on 2 lbs.; 4 lb. package, \$2.50, plus postage on 5 lbs.

Potting Soils. We have not formerly listed potting soils but give soil formulas and

listed materials for making them. We still do this but many prefer to buy a ready made mixture.

Black Magic. African Violet Mix. Has been used by many and the users praise it. The formula is an excellent one and most plants should thrive in it. It contains no earthy soil but is entirely organic with exception of materials for improving drainage and aeration. 8 oz., price 45c.

Peat. Best Holland Peat in highly compressed bales. 4 lbs., 50c; 10 lbs., \$1.00. F.O.B. If by mail, add 2 lbs. for carton and send the postage. Bales weigh about 100 lbs., up to 115. Price \$7.00, plus 50c packing charge if shipped. F.O.B. Express.

Sphagnum Moss. Best we can get. 70c per lb., postage extra, for 2 lbs.

Osmundine, best Florida brown fiber \$1.35 per lb. package, postpaid.

Plant Labels. The following are plastic labels, easily written upon with pencil.

Pot Labels, length $4\frac{1}{2}$ ", 35c doz. Length $3\frac{1}{2}$ ", 30c doz. Small labels for African Violets, 2" long, 30c doz. **Orchid Labels.** Perforated on one end, but without wire or cord, $2\frac{1}{2}$ ", 30c doz. **Aluminum Tree Labels.** Emboss name on label with sharp pencil or ball point pen. Two sheets of Aluminum make this strong and permanent. Aluminum wire to tie on. 35c doz. Package of 50, \$1.00. Please include with order of \$1.00 or more or send 15c extra for handling if order is under \$1.00, on all label orders.

Plastic Garden Hose. The best made. Cheap plastic hose will disappoint you. This hose is not damaged by sun, weather, being run over by trucks. Only hot water under pressure will injure it. It should last 8 years or longer. Weighs only $3\frac{1}{2}$ lbs. per 25 ft. Price, 25 ft., \$5.50, plus postage on 4 lbs. 50 ft., \$10.75, plus postage on 7 lbs.

Wire Baskets. Our wire baskets are electrically welded, galvanized, non-rusting steel. The best obtainable. They look better, last longer than painted, soldered baskets and cost but little more. Price with hangers: 8", 95c, \$10.50 per doz.; 10", \$1.20 ea., \$12.75 per doz.; 16", \$2.75, \$25.00 per doz. Postpaid.

Snap On Pot Hangers, for hanging any size pot in tree, lath or greenhouse. Galvanized, non-rusting steel. 45c ea., \$4.50 per dozen.

Baffle Spray Fogger. For greenhouse, lathhouse or outside. Fits $\frac{1}{2}$ " pipe. Adjustable fog spray thrown 6 ft. increases humidity, lowers temperature. Price, \$1.36. If by mail add 10c.

Hose End Fogger. Coarse or fine spray. Useful for spraying orchids, tub. begonias, etc., and for damping greenhouse to increase humidity or as a moveable fogger. \$1.50. Postage, 10c extra.

Rootone. Dust seed, roots of transplants, end of cuttings or base of bulbs for quick rooting, more rapid growth. $\frac{1}{2}$ oz. 50c, postpaid. 1 lb. can, \$5.00, plus postage for 6 lbs.

Vitamin B-1, 100 tablets, 75c.

Directions for use, applying only to our own tablets. In transplanting bulbs or any plants, loose roots, dissolve 5 tablets in 1 gal. of water. Soak roots in this 15 to 30 min. Pour solution around plant when set. To stimulate growing plants, for the first application, dissolve one tab. in 2 gal. water. For succeeding waterings, use 1 tab. to 4 gal. water once a week. **Warning.** Do not soak dormant bulbs in Vit. B-1. It rots them.

CATALOG ARRANGEMENT

is by Plant Families, according to their relationship.

In the following lists the **genus** (plu. genera) is mentioned first. After it, the species (plu. also species) or horticultural variety is named. The initial of the genus is used for the second and succeeding species. Thus A. will stand for Amaryllis or Agapanthus depending on the genus last named in full. When a person's name in parentheses follows a plant's name, that person is the botanical authority for the name.

THE AMARYLLIS FAMILY — Amaryllidaceae

This Family includes the following bulbs, Agapanthus thru The Alliae.

The American Plant Life Society was founded in 1934 as The American Amaryllis

Society. The interests of the Society have recently been enlarged to include other bulbs and plants and the name changed but with no lessening in interest in Amaryllids.

The annual book, "**Herbertia**," is devoted to Amaryllids. It consists of about 250 pages, beautifully illustrated, on fine book paper, and is edited by Dr. Hamilton P. Traub of the U.S. Dept. of Agriculture, (now retired) the greatest living authority on the Amaryllidaceae. Each member receives a copy.

The members also receive the occasional publication, "Plant Life," on other bulbs and plants. Due to present shortage of paper and its high price these publications at present are included in one volume per year.

Those who grow Amaryllis as an interesting and intellectual hobby and who love their vivid beauty, are invited to become members of the society. The annual dues are \$3.00 per year, which you may send to Miss Pauline Buck, Sec. 25 E. Camino Real, Arcadia, Calif., or you may include this membership fee with your bulb order to us.

The Society also publishes the following book, bound in manila paper.

Amaryllidaceae: Tribe Amarylleae, by Traub and Moldenka. 18 illustrations, 194 pages, \$4.00. This is a systematic treatment of one of the main tribes of Amaryllids, in scientific language. The most important work on the taxonomy of Amarylleae since the publication of Baker's "The Amaryllideae," in 1888. Order from the Sec. Miss Buck, please.

Amaryllid nomenclature. Carl Linnaeus, father of modern botany, made the first, rather complete scientific arrangement of plants according to relationships in the 18th century. His information about many plants was wholly inadequate to achieve perfection. Even in my later first French edition, 1798, nearly all American epiphytic orchids were placed in one genus, *Epidendrum*, and under the genus *Amaryllis* he included certain *Crinum*s, *Zephyranthes*, *Sprekelias*, *Brunsvigias*, *Nerines*, etc. Botany is a progressive science and later explorations and discoveries have made possible many improvements in plant classifications and have required changes in nomenclature. Horticulturists are often loath to accept the new classifications and names. But we must do so even if inconvenient at first. It is not logical to continue an error.

In our catalogs, we accept changes in classification and names as made by recent writers in *Herbertia*. These have been approved by "*Gentes Herbarum*," the publication of the Bailey Hortorium of Cornell University. To help you avoid ordering a bulb you already have we give both old and new names, thus: *Brunsvigia rosea* (*Amaryllis belladonna*); *Amaryllis advena* (*Hippeastrum advenum*).

Agapanthus, Blue Lily of the Nile. Best time to plant is early spring, tho early fall will do very well. They flower here in June to Aug. In the north they must be grown in large pots or tubs and wintered in a frost free room. Plant in full sun exposure in any good garden soil.

Agapanthus longispatus. Similar to well known *A. orientalis*, but smaller and later to flower. Profuse bloomer. Advised for pot growing. 50c, 3 for \$1.25.

A. orientalis. Dark Blue. More robust than *longispatus*. Superior clone, \$1.00.

A. orientalis, Sky Blue. 75c.

A. orientalis alba. Pure white. \$2.00.

A. von Weillighi hybrids. Selected clone. A giant type, very large, round umbel of blue flowers on a tall stem. \$2.50.

Alstroemeria (pronounced-stre, not stro). The Peruvian Lily. Many showy flowers in an umbel on long, slender, stiff stems. The pastel tones are rich and varied, long lasting and popular as cut flowers. Spring blooming.

Culture. They must have good underdrainage and therefore if possible, sandy soil. In heavy soil, their cultivation is made possible by the plentiful addition of sand and leaf mould, 60% to 75% sun exposure. Natives of Semi-tropical America, they have been grown as far north as New Jersey in the garden. This has been possible by planting large tubers about 5" or 6" deep and giving a heavy mulch. There is some danger of freezing and consequent loss in the north the first two winters. By that time they have usually deepened themselves below the depth of frost penetration. We cannot guarantee against loss by freezing, but we offer large tubers that will help.

Alstroemeria chilensis hybrids, assorted colors, red, rose, pink, cream, white in a multitude of shade. Separate colors not available. Large tubers 50c.

A. pulchella. Smaller plant. Umbels of green and red fls. 50c.

A. assorted varieties. These will be smaller clumps. 40c. \$4/doz.

Amarcrinum Howardi. Bigeneric hybrid of Brunsvigia roses and Crinum moorei. Does well in average garden soil, full sun in the south, not hardy in north. Late summer to fall bloomer. Fls. pure pink, very attractive. Small bulbs that will flower next year. \$2.00.

Amaryllis Linn. This genus as constructed by Linneaus was untenable because he included plants now known to belong to other genera. The invalid name Hippeastrum was used by both Herbert and Baker, but now we are scientifically correct when we use the name that has always been most popular. To the word "Hippeastrum," literally translated "horse star," we can now say "horse feathers" and forget the word.

Amaryllis are the easiest, the most showy and popular of all bulbs for growing in pots. Equally desirable for southern gardens where they are hardy along the east coast to N. Car. and on the west to Vancouver. In the middle section they may be grown as far north as Ark. and Okla., but note special directions for colder sections.

How to Grow Amaryllis. In the garden, in the deep south where temperatures go only a few degrees under freezing, Amaryllis bulbs need to be covered only about an inch or two. Farther north they should be planted about an inch below frost penetration, in protected places and mulched with straw, leaves, and/or brush. In Okla., a customer reports a depth of 4" with mulch is safe. Try our "Hardy Hybrids" and don't plant over about 6" deep to top of bulb. 4" deep is better. Amaryllis must not be planted close to trees, shrubs or large vigorous plants, whose roots compete and take the moisture. Irrigate frequently. Rain is seldom enough.

We do not advise you to plant imported or greenhouse grown bulbs in the outside garden. They seldom last more than a year or two. These high-bred "hybrids" have been bred for the perfection of the flowers. Little attention has been given to vigor. They can be shifted to the garden for summer growth but they must be given special attention, watered frequently and fertilized carefully. Take them inside for the winter. If they do not make roots promptly, try starting in small pots of sphagnum, well compressed and kept moist. When well started, shift with lump of sphagnum into proper sized pots. To get good growth, fertilize with Spoonit.

IN POTS. A 2½" bulb requires a 6" pot. Give a 3" to 3½" bulb a 7" pot. Remove dead roots but every vestige of living root should be left on. The best soil mixture is rich sandy loam 50%. The balance may be equal parts of sharp sand, peat, rotted leaf mould and rotted or dry, powdered dairy manure. Tablespoonful of bone meal to each pot is good. Place bulbs so that neck and about ¼ of bulb is above soil surface. Water well and keep soil slightly moist thereafter. After a few weeks the pots may be placed in a partially shaded place in the house or greenhouse and kept at a temperature of 55° to 60°. Better flowers result if plants are slightly shaded when flowering. During growth give liberal feeding with liquid manure or Spoonit and plenty of water.

There is no quantity discount on Amaryllis except as specified in the listing.

Amaryllis advena. Oxblood Lily. 5 to 8 ox-blood red flowers in an umbel, on a 10" slender scape, preceding foliage. Fall bloomer. **Culture.** Not suitable for pot culture, but so nearly hardy that in mild sections of north it will succeed where peaches or apricots may be grown. Plant bulbs 6" deep or more, and mulched, in a protected situation. Full sun exposure, heavy or medium loam soil is good but does well in lighter soils also. Order before September 15 if possible, or you may miss first year flowers. **Special prices:** Largest bulbs 60c. Blooming sizes 50c. Medium 30c. Small bulbs 15c. \$1.50 doz. Per 100, \$10.00 postpaid or \$9.00, f.o.b. express. Everyone should grow this easy Amaryllis, hardy, at least as far north as southern Kansas.

A. ambigua. Lily shaped, white flowers with pink markings, on tall straight stems. 5 to 7 flowers in an umbel. The exquisite spicy fragrance perfumes the entire garden. Plant 4" deep in garden in south, to Okla. \$2.50.

A. immaculata (syn. *A. candida*). The very large, pure white flowers are lily shaped

and exquisitely fragrant. This very rare and beautiful amaryllis is a prized possession for any flower lover and grows to a very large size, 5 lbs. or more. They are hard to get but more desirable than white hybrids at the same price. Price \$5.00. Very large, \$6.50.

Hybrid Amaryllis. Our hybrid Amaryllis are selected from the best field grown, American strains, mostly Howard and Smith's, and we call them therefore "Select Strains." They are hardier and easier to grow and flower than greenhouse grown, imported bulbs. In order to produce high quality, selected bulbs are grown in the greenhouse one year for seed production. They are cross pollinated by hand. When the seedlings flower in the field, those not true to the color class of the parents are rogued out. Some off colors are likely to be missed and we do not guarantee the color but if customer is not satisfied when they flower, the bulb may be returned and we will replace. Even tho when the color is not as expected, few customers are willing to part with the bulb. We especially recommend the **Assorted Colors**. They are as good or even better than classified colors as some desirable shades, difficult to classify are included. A few are self colors.

Select Strains, Assorted Colors, shades of red, scarlet, salmon, orange, crimson, rose, white background, etc. 2½" - 3", 90c ea. 3 for \$2.50. 12 for \$9.50. 3" or over \$1.50, 3 for \$4.25.

Select Strains, White Background. The ground color is white, variously marked with pink, rose or carmine. The general effect is of a white flower. 2½"—3" \$1.10. 3 for \$3.00. 3" or over \$1.65, 3 for \$4.75.

Select Strains, Near White. Similar to White Backgrounds but color markings are much lighter. Some are close to pure white. 2½", \$2.50 ea., 3 for \$7.00. Larger, near 3" or over, \$3.00 ea.

Select Strains, Self Red. These were tagged in field. No other record as to quality or size of flower was made but they vary. 2½", \$2.50. 3" \$3.00 ea.

Houdyshel's Hardy Hybrids. These are not hardy outdoors in the colder northern states but as far north as North Carolina, Washington, D. C., and Oklahoma these have proven winter hardy if covered by 4" or 5" of soil and given a good winter mulch of straw. Possibly with a pile of brush above the straw they might be wintered in the garden farther north.

This is an extremely vigorous, rapid growing and multiplying strain and equally prolific with flowers. There are always a few flowers in the field in the fall. They might give winter flowers in pots. Most of them are similar in color, orange scarlet with white throat and green keel. An ideal strain for outside planting and landscape effects. Their bright vivid color "hits you in the eye." Altho not an exhibition type, many will like them in pots, where they are easier to grow than the more aristocratic hybrids, and their bright cheerful colors in Feb. and March will be most welcome. Price 75c each. \$7.50 per doz. \$50.00 per 100, prepaid. Extra large bulbs, \$1.00. \$10.00 doz.

Amaryllis Seed. We have less even than usual and must price accordingly, but not above their value. 25 seed for \$1.00. Order early. We shall soon sell out.

Plant seed as soon as received in good sandy loam soil. Add a good portion of fine leaf mould. Seed may be just touching on edges. Cover with ½" soil. If in pots and soil is wet, cover with a pane of glass and they are likely to come up before soil becomes dry. Keep seedlings in house or greenhouse the first 2 or 3 winters so that they can grow all winter. If this is done, they usually begin to flower in 2 or 3 years. They can be transplanted at any time to give more growing space.

Plant Breeding is an interesting science and art. Undertaken as a hobby, it has often resulted in fame. It will involve and develop great skill, ideals of beauty, good taste and intelligence. I suggest you start with our Select Strains. Get several bulbs and use the pollen only from those you like the best. Cross pollination is easily accomplished by placing the powdery pollen borne by the six stamens on the stigma in the center. The stigma when ready for pollen will usually be opened into three parts. Seed should be planted soon after ripening. Some of the seedlings of our Select Strains will be fine self colors.

Brunsvigia rosea (Sym. *Amaryllis belladonna*, Aitson). Familiar in Calif. and the south as *Amaryllis belladonna*, Naked Lady Lily, etc. It is hardy where minimum winter temperatures are about 10° above zero. It will be safe to plant it on the east coast to N. Car. and to Washington, D.C.; thruout the south where winters are mild; on the Pacific Coast to Vancouver. They do not always succeed in pots. We have had reports of good growth but no flowers in Fla., Miss. and La. Customers should always report to us the success or failure of such bulbs so that we may know where they may be grown successfully and where they may not. This So. African does well where there is no rainfall from May 1 to Aug. 1, as here or in its habitat. It is just possible that in regions of heavy summer rainfall as in La., Miss. and Fla., where they seldom flower, that if bulbs were dug when dormant about June, placed in pots or boxes with roots covered by soil to keep them alive, stored in a dry place, then planted back Aug. 1 and watered that they might flower. Try it if you have non-blooming bulbs. The flowers are an exquisite pink with a fine fragrance. Aug. and Sept. visitors to So. Calif. take back home the memory of these and want them.

Brunsvigia rosea major. Earliest to flower, late July to Sept. 15. 35c, 50c and 65c ea. Assorted sizes by express, f.o.b. \$25.00 per 100.

B. rosea minor. Smaller bulbs, plants, and flowers and bloom later, thus extending season. Fine pink. Rare. 50c.

B. rosea, "Covina Hybrids," from a Covina garden. Several fine colors, assorted. L. 35c, 60c and immense bulbs for \$1.00.

B. Parkeri. This is a larger flowered and deeper rose form. A great improvement. Special price, 50c, 75c and \$1.00 each.

B. multiflora var. Hathor. This is a pure white Belladonna Lily and is very rare and most beautiful. Everyone who loves the "Belladonna Lilies" and can grow them, should have this white one. Price reduced. \$2.50 ea.

B. rosea. Assorted varieties and sizes. We have a surplus of some and will mix and send 50 for \$7.50 or 100 for \$12.50. Express, f.o.b. This is less than wholesale and is an excellent buy for florists, or to grow for church decoration.

Clivias have evergreen, strap-like foliage somewhat resembling that of *Amaryllis*. The flowers are produced in umbels of 10 to 25, in rich and exquisite tones of orange, in March and April. When not in flower the deep rich green foliage and later the red fruits are most ornamental.

Culture. They are usually grown in pots, even in the south, as more perfect foliage is thus possible, and when in flower one wants them in the house. We grow them in a lath house, lath spaced $\frac{1}{2}$ " apart, and in garden under Avocado (evergreen) trees, directly in the soil as they are often grown in Calif. When grown thus they will make very large clumps. They must have shade with only a few flecks of sunshine, but plenty of light and air.

Clivias must never be dried off or allowed to lose their foliage. Keep them well watered after flowering, all summer and fall. Liquid fertilizer occasionally helps. When growth ceases in late fall rest them by giving them less water. But keep moist enough to prevent wilting of foliage. At this time they should have a cool room with temperatures from above 32° to not much over 50°. Pots should be 8" for a small plant and up to 12" for larger. As they grow and increase, do not divide but shift to larger pots. Drainage must be perfect. Potting soil is described under "General Culture Directions." pH 7 is about right. One cannot guarantee a Clivia to flower the first year after moving tho they usually do.

The foliage of our Clivias, grown outside in the ground, will not be as perfect as that of pot grown plants. But when potted, they replace the old foliage in a few months and become specimen plants.

Clivia miniata. Wide open soft yellow orange fls. \$1.00, \$2.00 and \$2.75.

C. miniata hybrids. Similar to the species "miniata" in foliage, hardiness, wide open flowers, etc., but there is some variation in color and form of flower. Most of them are in light orange tones. A few are dark and a few have a white throat. Do not express your color preference for any Clivia hybrids as we cannot tell the color from the plant.

Special temporary prices. We want to move a lot out of a lath house and offer these special prices. Blooming size \$2.50. Smaller sizes at \$1.00 and \$1.75 ea.

C. cyrtanthiflora. Very rare hybrid between *C. miniata* and *C. nobilis*. Large umbels of rich orange, tubular, pendant flowers. Large clumps show flowers in almost every month. Today, July 15, there are 3 in bloom in our very small group. Plants become large, multiply very rapidly if watered frequently and require deeper shade. Price, blooming size plant, \$15.00.

Crinums are listed only in our Spring Catalogs. In the deep south they may be planted at any time of the year. In the upper south to Missouri, near the border line of their hardiness, the hardier sorts are usually planted in the spring. **C. Cecil Houdy-shel** is hardy in Brooklyn. Large bulbs flower from early spring to late fall. We have some immense bulbs, weighing 3 to 5 lbs. for \$6.00 ea. In the north, plant in a hole 8" deep. We guarantee them hardy. For the complete list of Crinums, send 10c for our spring 1953 catalog.

Daffodils belong to the Genus *Narcissus* of the Amaryllidaceae. **Trumpet Daffodils** are too well known and popular to need description. **Culture:** They are easy in most of the U. S. except parts of Fla. They do not succeed well in the tropics. They do well in a sandy loam or in heavy soil. It may be enriched by leaf mould but no manure. Slight shade seems favorable but full sun exposure is not bad. The most favorable planting depth is about 6" for large bulbs and small bulbs not so deep. They may be planted in Oct. to Dec. We are obliged to reduce our acreage and offer you a bargain in the following more desirable varieties. These are mostly small but blooming size bulbs.

Aerolite. Large, pure deep yellow. Med. early. 15c ea.

Alasnam. Hybrid of King Alfred. Better and earlier. 15c.

Dick Wellband. Incomparabilis. Fine white, orange cup. 20c.

Fortune. Giant Incomparabilis. Yellow with frilled orange cup. Early. One of best. 20c. Smaller, 15c.

John Evelyn. White. Yellow cup tinted apricot. Large, outstanding. 15c.

Winter Gold. Earliest, Feb. here. Elegant, golden yellow. 15c.

Special attention. Our stock is large on some, small on others. To be sure you share in these bargains, tell us that we may substitute.

Paper White. *Narcissus*. Hardy only in South. Assorted sizes. 75c doz.

Eucharis amazonica (or *Grandiflora*). Eucharist Lily. Star of Bethlehem. First collected on banks of Rio Magdalena, Colombia, S. A. Thus are combined three Biblical names in the lore of this flower. There are 4 pure white, very fragrant flowers in an umbel with a cup in center. The beautiful evergreen foliage makes this always a decorative plant. Flowers are used in corsages and bouquets.

Culture. For pots only. Soil, coarse, fibrous loam with coarse sand, granular charcoal, tablespoon of bone meal and a little cow manure added is usually recommended. We add peat and milled or even coarse sphagnum moss and get excellent growth and flowers.

Because they need abundance of water when blooming, the drainage must be perfect. Use 5" pot. Feed with Spoonit or manure water except when resting, shaded but plenty of light and some sun is needed to develop flowers. Frequently they flower very soon after potting. If they do not, induce good growth for several months until offsets appear and pot is well filled. Then dry them off, giving only enough water to prevent entire loss of foliage. After a few weeks rest, water once or twice. If they do not flower the rest was not long enough or the growth before was not sufficient. From 2 to 4 crops a year may be had. They are tropical plants and 65° is the best minimum night temperature. We offer best and largest bulbs we can get. If dry bulbs are not available we send plants. They are too tender to ship north in coldest months. \$2.00 ea.

Habranthus bloom several times a year and at most any time. Culture like Amaryllis. After good growth, if allowed to get rather dry for a period they will usually flower after a good watering. Umbels have but one flower. **H. brachyandrus**, lavender purple fls. 75c. **H. robustus**, pink lavender, 40c. **H. andersoni texana**, coppery yellow fls. in July-Aug. 40c, available only to Sept. 15.

Haemanthus. The Blood Lilies of South Africa. So rare that few have seen them.

Culture. Hardy only in almost frost free climate like So. Calif. or Fla., if temperatures do not go below 24° at night. They do well in pots anywhere. The soil should be very sandy and contain a good proportion of leaf mould and peat as they are shade plants and like mildly acid soils. They do well as house plants in pots.

The following should be planted with tip of bulb even with soil surface.

Haemanthus carneus. A very small species with two small, prostrate, almost round leaves. The umbel of flesh pink flowers come in July to August. You will not get to see the flowers this year. We can supply the small bulbs for \$2.00 ea. Grow in a 4" or 5" pot and see flowers next year.

H. coccineus. True Blood Lily, altho all *Haemanthus* are known as Blood Lilies. The umbel of scarlet or blood red flowers (some call them pink) comes in late Aug. to Sept. Unless you order promptly they will be thru flowering. The scape is part of the floral display as it is covered by red spots on a light background. Following flowers are red fruits containing large seed. Save and plant the seed. Use the plants for gifts. Small bulbs that may or may not flower, \$2.50. Blooming size \$3.25. Large, often gives two scapes, \$4.00.

H. multiflorus and **H. Katherinae** will be listed in our Jan. catalog. They will be priced at \$5.00 and \$7.50 ea. They can be ordered now if you wish as we are unlikely to have over 50 bulbs of each.

Growing Haemanthus seed. When in flower they can be pollinated by rubbing palm of the hand over the umbel. Do this daily until all flowers have opened. If properly done many seed result. We plant seed in 8" or 10" clay pans, half filled with wet peat or sphagnum. Any organic compost will do and sand can be added to improve drainage. Remove pulp from seed and press down slightly, into surface of wet compost but do not cover seed. Place a pane of glass over the top and thus little watering is necessary. Keep shaded and warm. If radicles do not penetrate the soil, help them.

Hemerocallis. Daylily. The flowers range in color from dark bronzy red, thru pastel tones of pink to orange and yellow. They are borne on a branching scape well above the foliage.

The Greek name, meaning "beautiful for a day," refers to an individual flower. But these are so freely produced thru a long period, that "beautiful every day" would be more apt, as a collection of several sorts show masses of flowers throughout the spring, summer and fall and here we often have some winter flowers. The modern sobriquet of "The Perennial Supreme" is well deserved.

Culture. While their beauty is their greatest recommendation, their easy culture and hardiness add to their desirability. I have known abandoned plants here, where we have arid, hot summers, to persist for years. They grow well in full sun. Slight shade is better. If given constant moisture about their roots, preserving this and coolness of the earth with a good mulch, the plants are ideally situated and respond with generosity. They are hardy, even in severe winters in the north. They are fibrous rooted, not bulbs, and must be planted at once when received. Altho they can be moved any time, it is better to ship from late fall to early spring.

They are an almost perfect border or landscape plant, never have to be dug and replanted. All that you must do for them is keep the weeds down and water. A heavy leafy mulch helps every way. Those marked E. are evergreen here.

Hemerocallis Araby. 30". E. A lovely pastel color, with the effect of bronze on gold dust. Blooms early. 75c.

H. Calypso. Large, fragrant lemon yellow flowers. Opens in evening. 42". June-August. 30c ea.

H. Cecil Houdyshel. E. A Dr. Traub origination. A deep crimson with an old copper shade that makes it outstanding in our garden. Slight shade gives better color to flowers. 3 ft. June-July. \$1.00.

H. Chengtu. E. Brilliant coppery orange-red with carmine mid-zone. 36". July-Sept. 50c.

H. Cinnabar. E. Cinnamon sprinkled with orange, gold-glistening. 30". July-Aug. 50c.

- H. Crown Prince.** E. Color like Mikado. 30". June-Aug. 25c ea. Per doz. \$2.25.
- H. Dauntless.** E. Cadmium yellow. Fulvous red blended in mid-zones. Pastel effect. 30". June-Aug. 75c.
- H. E. A. Bowles.** 48". Large ruffled flowers of deep red-orange blended with gold. Early. 50c.
- H. Evangeline.** 40". Large, rosy flowers with purple eye zone. Early. 75c.
- H. Florham.** E. Still popular old hybrid. Large, golden yellow. May-July. 50c.
- H. Florida.** Pastel shades. Light chrome yellow with rose blush. Darker mid-zone. July-Aug. \$1.50.
- H. Iris Perry.** E. 36". July-Sept. Orange-bronze. 50c.
- H. Kwanso.** The Double Orange Daylily. 25c ea. 3 for 50c.
- H. Linda.** E. Petals, ruffled golden yellow, flecked with cinnamon, and a rose zone. Sepals, pure yellow. Very lovely. June-July. 50c.
- H. Mandarin.** E. 48". Lemon yellow. June-July. 50c.
- H. Margaret Perry.** E. Brilliant orange-scarlet. 4 ft. July-Aug. 35c.
- H. Mikado.** E. Orange with mahogany-red zone. A favorite. 3 ft. May-July. 35c.
- H. Modesty.** 36". Large, pale creamy yellow. Our nearest white. 50c.
- H. Nubiana.** E. Dark chocolate-red with yellow stripe in petals. One of the darkest varieties. 2 ft. 50c.
- H. Patricia.** 30". Pale yellow, large, fragrant flowers. July-Aug. 50c.
- H. Radiant.** 42". Rich orange, June-July. 50c.
- H. Rajah.** 40". Deep English red, veined darker. Garnet red eye-zone. July-Aug. 50c.
- H. Rosita.** E. 36". Near carmine, tinted copper. Part shade best. \$1.00.
- H. Royal.** E. 40". Beautiful golden yellow. Fine texture. July. 75c.
- H. Royal Ruby.** All agree, it is the finest red, to date. Whether ruby, carmine or crimson is undecided. 40". July-Aug. \$2.50.
- H. Serenade.** 48". Rose on apricot cream. Faint dark overcast. June-July. 75c.
- H. Sibyl.** E. Dark red-purple petals, lighter sepals. \$2.00.
- H. Soudan.** 36". Lemon yellow. Broad, wavy petals and sepals. June-July. 50c.
- H. Spitfire.** 30". Fiery red, yellow mid-rib and throat. Almost constant bloomer, spring to fall. \$1.00.
- H. Vesta.** 30". Deep orange with glistening gold sheen. May-July. 50c.
- H. Vulcan.** E. 30". Darkest maroon red. July-Aug. 75c.
- H. Wau Bun.** Large apricot, sprinkled fulvous-red. The twisted and curved petals add gracefulness to its beauty. 75c.

Complete Collection. The entire list of 32 varieties are priced singly for \$22.75. They will be labelled with permanent aluminum garden labels, an added value, for \$21.00 postpaid. If by express, f.o.b., we will send larger divisions.

Leucojum aestivum. This hardy amaryllid is prized for its hardiness in cold climates, its very early flowering, often before snow is gone, and its umbel of dainty white flowers, with a green dot on petals. Plant 4" deep. Blooming size bulbs, 25c. \$2.25 per doz.

Lycoris. Oriental Spider Lilies are natives of Japan and China. They are among the most outstanding bulbs in Southern gardens, along with Crinum and Amaryllis. Most of them have been very high priced until recently, when Japan began exporting them in large numbers to the U. S. We have imported about 3 lots. Often the imported bulbs arrive too late to flower. We have grown these bulbs now for from one to several years. They are American grown and we can deliver early.

Culture. *L. aurea* is a semi tropical species and is not hardy as far north as the others. It can however be grown in pots. Some have also grown them in cold frames, on the eastern coast as far north as Washington, D. C. *L. squamigera* and *L. Sprengeri* are hardy in the north as the foliage does not appear until spring. *L. radiata* has been reported by one of our customers as hardy and flowering in S. E. Kansas, but foliage is winter growing and needs some protection. The others are winter growing and hardy to N. C., to Okla., and probably to Oregon on west coast, if near ocean. In Calif. they may be grown inland where oranges are hardy.

Lycoris prefer neutral to acid, sandy soil. They are much favored if liberal amounts of leaf mould and peat are added to the soil and a little peat should be close to the bulbs when planted. They may be planted so that bulb is covered by 3" of soil. Plant as early as possible and one can begin watering in Aug. especially for *L. aurea* which is an early bloomer. When they become dormant in the spring, dry conditions are favorable.

Lycoris albiflora, white flowers with some color markings. Profuse bloomer and rapid multipliers. \$1.25.

***L. aurea*, Golden Spider Lily.** In Saint Augustine, Fla., they are called "Hurricane Lilies." \$1.25.

***L. incarnata*. The Incarnate Spider Lily.** Flesh pink. Almost hardy. \$1.25.

***L. radiata*. Red Spider Lily.** One of the most spectacular flowers in southern gardens. It was long believed to be Guernsey Lily. This bulb does not like moving and does not always flower the first year. 40c, 60c and extra large bulbs, 75c. Last two should flower this fall.

***L. sanguinea*.** A small species with small bulbs. Red as name indicates. Summer bloomer. I have not seen the flowers. \$2.00.

***L. sprengeri*.** Sold out.

We have the following on order from Japan. It is possible that they may arrive in time to flower this fall—but doubtful. They are from the most dependable grower there. Delivery as soon as they arrive.

***L. albiflora carnea*.** Salmon pink flowers with satin sheen. \$2.00.

***L. purpurea*.** Flowers later than *L. squamigera* and are more bluish. This may be the variety known mostly by rumor, *L. squamigera purpurea*. See Hortus 2nd. \$2.25.

***Nerine*.** This genus includes some of the most beautiful of flowering bulbs. They bloom in succession from about Aug. to Jan. Hardy only where temperatures seldom go lower than 26°, but they are fine pot bulbs. **Culture.** Pot or plant in acid, sandy soil. Add peat or leaf mould. Pot at once with bulb covered and a little deeper in garden, in full sun. When foliage yellows, withhold water. Keep as near dry as possible when dormant.

***Nerine Bowdenii*.** 10 or more fine pink flowers in an umbel 9" wide on a 15" scape. One of the finest *Nerines* and very easy. 50c and 75c ea.

***N. Bowdenii*, var. *Pink Beauty*.** Has larger, finer flowers and flowers much later, usually in late Dec. or early Jan. Multiplies rapidly yet we can seldom have enough stock to list. \$5.00 ea.

***N. Bowdenii*, var. *Magnifice*,** very fine improved *Bowdenii*, similar to *Pink Beauty* but flowers earlier. Extra special price, \$1.00 ea.

***N. filifolia*.** Very small species with pretty pink flowers in umbels and terete, evergreen leaves. 50c.

***N. fothergilli*.** Vivid red flowers. \$2.50.

***N. fothergilli* hybrids.** Variable shades of red and pink. Some are *Bowdenii* crosses and similar in color. \$2.25.

***N. rosea-crispa*.** Hybrid of *Filifolia* but larger in all parts. Can be kept evergreen or dried off. 75c.

***Pancratium maritimum*.** Because flowers resemble *Ismene* this is sometimes called Peruvian Daffodil, the common name for *Ismene*. The flowers have a daffodil-like cup, pure white and very fragrant. Evergreen foliage. 50c ea.

***Sprekelia formosissima superba*.** Orchid amaryllis. Deep crimson flowers in orchid-like form. Much larger than common type, better color, more flowers. Evergreen. Fine in pots. Culture like *Amaryllis*. 75c.

***S. formosissima*, type variety.** Similar color but slightly variable. Our bulbs of these are larger than the above, this year. 75c.

***Tulbaghia violaceae*.** Small cousin to *Agapanthus*. Mauve flowers produced thruout the year, a true ever-bloomer. Foliage has garlic odor if bruised. An acquisition for pot culture. 25c ea. \$2.00 per doz.

***T. fragrans*.** This species has a large, true bulb, with glaucous green foliage, 18" long

and 1" wide. It has no allium odor. The plant is a profuse winter bloomer in a cool room, with a few flowers in summer. It has larger fragrant flowers than violaceae, in the same color. Evergreen. \$2.00.

Zephyranthes. Fairy lilies. The smallest Amaryllid, 6"-12" tall. Fine in beds or borders. Hardy in middle south. In north dig and store. They may be grown in pots. Give acid soil, sandy loam with leaf mould or peat. Full sun or slight shade.

Zephyranthes candida. Pure white, evergreen. The masses of white flowers in late summer make them outstanding in a bed or edging for border. Half hardy and easy in pots. 2 for 25c. \$1.00 per doz. Per 100, \$5.00.

Z. grandiflora. The largest Zephyranthes. It is very easy to grow. In the south, its habit of flowering every time it rains in summer gives it the name of Pink Rain Lily. Small bulbs, 2 for 30c. 12 for \$1.25.

Z. rosea. Small, but very lovely deep pink flowers. They do not do well in alkaline soils. It should be acid. Fine in pots, about 8 or 10 in a 5" pot. 15c ea. 10 for \$1.25.

BULBS AND PLANTS AS PRESENTS

When you wish to select a present, why compete with shopping crowds until you are so tired that you finally select something doubtfully satisfactory. Impatient, tired salesmen or those who exert pressure do not help us to make a wise choice. Many of your friends would prefer a bulb or a plant anyway. Garden books, African Violets, Orchids, Amaryllis, Oxalis—all make nice presents. Take it easy. Sit down in a comfortable chair and select your presents from our catalog. Items to value of \$1.00 or more can be sent postpaid to your friend. Send your own card to enclose or have all sent to you for distribution.

IRIS FAMILY — Iridaceae

The Iris is the type genus of this family, which includes Iris, Gladiolus, Watsonias, Freesias, Sparaxis, Tritonias, Babianias, etc.

Tall Bearded Iris. A garden is not complete without a good collection of Bearded Iris. These can be planted until late into the fall, but the earlier you plant the more flowers you will get next spring.

Our "Iris 400, Price List," lists nearly 250 of the newest and best. The culture information is valuable as it tells you how to grow them and how to get a profusion of flowers every year. In order to make this available to everyone, whether they wish to buy or merely want the culture information, we charge a dime for it. Don't ask for a free copy. This is a folded sheet, 9"x18", printed on both sides, no illustrations.

Special Offer of Bearded Iris. We have a surplus of several excellent varieties from this list and offer 100 rhizomes in 20 to 30 varieties assorted, unlabelled, f.o.b. express for \$10.00.

Orders can also be filled from the price list.

Miscellaneous Iris. Iris reticulata. Smallest, daintiest, most fragrant and bluest iris. Planted early, 4 to 6 in a 4" pot, soil very sandy and with peat or leaf mould added in a sunny window, they can be had in bloom for Christmas. They are hardy in north. 25c ea. 6 for \$1.00.

I. unguicularis. Hardy only as far north as Washington, D. C. Bluish lilac fls. in winter. Needs partial shade. Water frequently when first planted. 50c.

I. Douglasiana, var. Watsoniana. Blue. Calif. native. Hardy in north. 75c.

I. spuria aurea. Tall yellow. Hardy. 75c. **I. spuria ochroleuca,** similar, fls. white with yellow falls. 50c.

GLADIOLUS

How to Grow Gladiolus. Glads planted Nov. 15 to Mar. 1 in Southern California and thruout the south (a little later in Northern California and early as possible in spring in the east) are reasonably sure to escape the attack of thrips.

Thrips are very small insects that suck the juices from the plant. They cause the flowers to wither or appear burned, and appear only after weather becomes warm. To avoid the damage thrips do, four measures are effective. Plant early. Plant clean, treated bulbs. Keep them reasonably moist and well cultivated, with no weeds. Dust with Chlordane. A hand duster and Chlordane can be bought from most local feed or seed stores. Chlordane tho toxic is safe to use but do not use on vegetables. Be careful not to breathe much of the dust. It also kills ants and other pests.

Dust Gladiolus 3 or 4 times before flowering. Begin when plants are 6" or 8" tall.

Many will prefer to spray instead of dusting. For a spray use "Thripocide" which we list under "Garden Supplies," 4 oz. for \$1.15 postpaid.

Plant large bulbs (really "corms") 4" to 5" deep. Half inch bulbs, 3". Bulblets 2". Twice their diameter apart. Rows 20" apart, in full sun exposure. Best soil is sandy loam but they do very well in heavy soils, especially if leaf mould and compost is added. Alkaline soils do not produce good Gladiolus. Correct them by addition of peat or leaf mould. Use only well decayed manure, if any. Spoonit is an excellent mildly acid fertilizer.

Sizes. Size No. 1, 1½" up. No. 2, 1¼" to 1½". No. 3, 1" to 1¼". No. 4, ¾" to 1". No. 5, ½" to ¾". No. 6, all under ½". In the following list L. means large, No. 1 or 2; M. means medium, No. 3 or 4; S. or small are No. 5 or 6. Smallest sizes bloom and often bulblets. No. 2 and 3 are preferred for growing commercial cut flowers.

Prices are for one bulb. Multiply by 10 for price of one doz. 6 at doz. rate. 100 cost 70 times the cost of one or 7 times the cost of one dozen.

Our bulbs are grown in rich soil, on the heavy side. They are not always as nice looking as bulbs grown in the thinner sandy soil. They often perform better and we guarantee them to grow well.

Bridesmaid. The right name for this "Peaches and cream", Glad. L. 8c.

Buckeye Bronze. Red bronze. Fine cut flower. L. 12c.

Burma. Heavily ruffled, deep rose red. L. 7c.

Capehart. Early, salmon rose. L. 5c.

Chaumony. Beautiful bright rose with silver edge. L. 10c.

Connecticut Yankee. Reddish pink. A new favorite pink and perhaps the most beautiful of all. L. 13c.

Debonnaire. Well known tall pink. L. 5c.

Elizabeth The Queen. Deeply ruffled, large lavender flowers. Many consider it the most beautiful gladiolus. L. 10c.

Ethel Cave Cole. Florists' favorite light pink. Large flowers, early and near perfect. L. 6c. No. 1 and Jumbos for 8c. They are a little earlier.

General Eisenhower. Very large begonia rose. Up to 8 open at once. 10c.

H. B. Pitt. Very fine large orange pink. L. 10c.

June Bells. Tall, large ruffled white. Earliest. L. 12c.

Mauve. I always wanted a Mauve Gladiolus. This seems to be the closest possible. We introduce it for 50c, an unusual introductory price. Limit one. Tell me your opinion. L. 50c.

Pacifica. Very early tall, large white. Fine for cutting. L. 7c.

Red Charm. The favorite florists' pure red. L. 7c.

Red Unknown. A fine early red. Name unknown. 6c.

Snow Princess. A very fine early white. L. 7c.

Spic and Span. Ruffled deep pink. Very vigorous and even bulblets give nice spikes for cutting. L. 10c.

Timor. A medium red of great beauty. 15c.

White Gold. The largest, tallest, early creamy white. The only criticism I've heard is, "too large." It's a one spike bouquet. L. 8c. Jumbo, 12c.

Assorted. No. 1's and Jumbo, \$1.00 doz. No. 2 and 3, mixed sizes, 50c/doz, \$3.50/100.

Assorted Bulblets. \$1.00 per pint.

Hardy Gladiolus. *G. byzantinus*, a species, 30" tall. Fls. of dark purple. We have before described this as hardy in the north. We sent a few to our revered friend A. E. Kunderd of Goshen, Ind., the all-time greatest American gladiolus breeder and grower and he confirms this fact. You can grow it in the cold states, year after year, without digging. We are making it available at a special price for this fall, 25c ea. \$2.25 doz. It may be advisable to store at about 40° and plant in spring, for the first year.

Marica. Long a favorite house plant. See the book, "Enjoy Your House Plants." The blue flowers on a leaf-like scape are pretty. They are followed by small plants that bend the scape to soil surface where they take root. This stepping away gives them the common names of "Walking Iris" and "Apostle Plant." They are hardy only in the deep south where they do well in shade of trees. They are fine pot plants in the north. Flowering season is Jan. to April but sometimes later. They must have acid soil. In pots use very sandy loam, leaf mould and peat, equal parts.

Marica *gracilis*. Smallest and earliest. (5" pot.) 75c.

M. Northiana. Larger, better fls., slow propagator. (7" pot.) \$2.00.

M. Northiana x *gracilis* hybrids have flowers equal to Northiana. They flower as profusely as *gracilis* and the plants increase more rapidly. Superior to any other Marica. \$1.50 ea.

Moraea polystachia. 2 ft. stems produce a multitude of iris-like flowers, violet with mauve and yellow in throat. A bed is a stunning sight. They increase rapidly by self-sown seed. Hardy in south and middle south to Tenn. In the north grow in a 5" pot, sandy soil with leaf mould, full sun. 15c and 25c ea.

Culture suggestions. Iris reticulata, Moraea polystachia, Sparaxis, Ixias and Babianas have similar culture requirements: Full sun exposure. Hardy to at least 28°. Winter growers here and hence as pot bulbs they do not like hot rooms. Soil should be sandy to drain well and contain much humus which may be leaf mould and/or a little peat. All are most desirable pot plants, 6 in a 5" pot.

Ixia hybrids. Mostly yellow or white, when open. They close at night and on dark days. The closed flowers are equally pretty as they are striped like candy kisses, but lengthwise. Large, 3 for 25c. 75c doz. Small corms that flower well in outside garden, 3 for 20c. 50c doz.

Sparaxis hybrids. Richly colored flowers on plants about the size of Freesias. Mostly red shades. No perfume. Easier to flower in pots than Freesias, a little hardier in south. L. 3 for 20c. 60c doz. Blooming size, 6 for 30c. 40c doz. Use large for pots.

Babiana hybrids. Mostly blue shades, from intense violet to blue, sometimes almost purple. The foliage is plicated or pleated. L. 3 for 25c. 75c doz. Blooming size, 4 for 25c. 50c doz.

LILY FAMILY—Liliaceae

Many call all bulbs, lilies, an error. Included in the Liliaceae are Hyacinths, Tulips, Muscari, Ornithogalum, Veltheimia, Scillas, etc. For Callas see Araceae.

S. peruviana. An ideal bulb for pots as foliage is nice and the flower raceme is just above foliage on a short stem and wide and rounded in form. Usually blue flowers but we also have a few white. Hardy to N.C. on the east coast, and in Long Island. There was a great renewed interest in these last season. White or blue, 60c.

Ornithogalum arabicum. A round, glossy black ovary in the center of a pure white flower makes a striking contrast at Easter time. Hardy only in south, but in the north they are easy in pots and bloom for Easter if planted early and grown in a cool room in good sun exposure. Low priced, easy to grow and desirable, early white flowers are a winning combination. L. 25c. M. 15c. One to 5" or 6" pot.

Veltheimia viridifolia. This is one of the most beautiful plants one can grow in a pot. The glossy vivid green leaves are wavy margined and form a perfect rosette much like a bird's nest fern. From the center arises a scape with tubular drooping flowers closely

spaced. The color is a deep rosy or purplish pink of an ineffable tone not found in any other flower. It begins to bloom, if planted early, in So. Calif. gardens or other equally mild climates or in pots in the north by Dec. 15 and continues for nearly 3 months as larger bulbs send up 2 to several spikes. **Culture** is very easy. Use a sandy loam soil to which is added fine screened peat or leaf mould about one-fourth. Some charcoal is good. Do best in part shade. Drainage must be good as they need frequent watering when in flower—but never soggy. Read potting directions again under "General Culture." Order before Oct. 1, if possible as after that date *Veltheimia* start to grow in storage. We can ship later but they are hard to pack after foliage starts. We have some marvelous bulbs this year from small to extra jumbo. There are only a few small, blooming size at 50c ea. Other sizes for 75c, \$1.00, \$1.50, \$2.00 and a few extremely large jumbos for \$2.50 ea. The larger sizes usually make several spikes and bloom much longer.

OXALIS FAMILY—Oxalidaceae

We amend our former classification of *Oxalis* based on growth habits. There are three types, Winter growing, Summer growing and Evergreen. The following are winter growing and blooming or evergreen. *Oxalis* are the brightest and most vivid of winter flowers for a sunny window or in outside beds in the deep south, where temperatures do not go much below about 26°. They give a profusion of bloom over several months time. They need a cool room.

Culture. Plant about 2" deep, 3" apart. Large bulbs may be farther apart and a little deeper. In pots, the smaller may go 6 in a 5" pot. They need full sun exposure and do best in a very sandy soil, rich or poor. Flowers close at night and on dark days. Tuberous rooted species start very slowly. Keep them moist and be patient.

Oxalis Bowiei. A large plant with bright rose red flowers. 3 bulbs to a 5" pot 5c ea. 50c doz. \$3.75 per 100. Largest size 10c ea.

O. brasiliensis. Bright magenta fls. Starts growing in winter. If constantly watered it may be evergreen, or almost. 25c ea.

O. cernua. Bermuda Buttercup. Deep golden yellow flowers. Very profuse. 5c ea. 50c doz. \$3.50 per 100. Extra jumbo bulbs 10c, 3 for 25c. 85c doz.

O. cernua, flore pleno, Double Bermuda Buttercup. Smaller plant than the above. The flowers are very double. 50c ea.

O. crassipes. Flowers bright rose. Evergreen and everblooming. Increases by tubers and can be moved at any time. Plant at once. Large tubers 25c each. 6 for \$1.00.

O. crassipes alba. A pure white form. Very pretty and always in bloom. 35c. 3 for \$1.00.

O. Grand Duchess. Low growing plants, but give a profusion of very large flowers in three colors. The **Pink, Lavender and White**, 5c ea., 50c doz., \$3.50 per 100. Largest size 10c each. Botanically, this is probably *O. variabilis*.

O. latifolia. Wedge shaped leaves. Fls. lilac purple. It may be evergreen. 25c.

O. Regnalli. Large, truncate leaves, reddish on under side. Trifoliate. Evergreen and everblooming. Large white fls. Tuberous rooted. 35c ea. 3 for \$1.00. This is probably the same as *O. rubra*, var. *alba*.

Oxalis Special. The bulbs offered in this lot are assorted in size and color. They will all flower well. Some are accidentally mixed, others are surplus. Price, 30 for \$1.00.

The above list and prices cancel all former offers.

THE CALLA LILY FAMILY—Araceae

This family contains the so-called Calla Lilies or *Zantedeschia*, Black Callas and other Aroids.

Culture. All *Zantedeschias*, *Arum palaestinum* and other aroids listed here are desirable for pot culture. *A. palaestinum* will start about Sept. or later. Do not put this bulb into moist soil before that or it will rot. *Zantedeschias*—pink, and yellow—may be potted by about Dec. 15. Don't rush them, as too much water before they start to grow

may rot them. They may be held back and started in early spring, here in late February. All do well in the garden in a moist semi-shaded cool place. They are not hardy in cold climates; dig in fall. The White Calla usually blooms in California in the garden in late winter. They may be planted in early fall in pots or garden. All do best in mildly acid soils, on sandy side. For acidity add peat. Most Aroids are shade plants.

It is an error to keep large White Callas growing continuously. If rested thru summer you will be rewarded with flowers. Callas as pot plants need some sun, enough to prevent spindly growth, plenty of light and like all plants, good ventilation. They need abundant water but good drainage.

Zantedeschia aethiopica. Well known **White Calla**. They can be potted anytime between Sept. 1 and Jan. 1. Even later if available. Water once when potted to settle soil. Then keep soil barely moist until growth is well started. When growing well they need plenty of water and perfect drainage, give about half shade. They are hardy outdoors down to 15° but tops may be cut down by frost at about 20°. Blooming size, 25c. Large 50c.

Z. albo-maculata, Spotted leaf calla. White flowers and ornamental foliage. As for the other callas they need enough sun to prevent spindly growth. We have small to very large. 40c, 60c and 75c ea.

Z. rehmanni elegans. Light pink Calla. Easier to grow and flower than the dark pink. A few are very light, almost white when forced but darker in the garden, and always beautiful. Large bulbs, 40c. 3 for \$1.15. Delivery Nov.

Z. elliotiana. Deep Golden Yellow Calla. Like all the callas, they need some sun. If they do not have it they grow too tall and weak and may fail to flower. Half sun is usually right. 30c ea. 3 for 85c. Delivery Nov.

Arum palaestinum. Black Calla. Solomon's Lily. Foliage and flowers are shaped like Callas but flowers are black and odorless. Plant 4" deep in garden, not so deep in a pot. Begin to water about Sept. 1. Flowers in Feb. Large for 75c and \$1.00 ea. Small, for a start, 35c.

Anthurium andraeanum. Until very recently these have been high in price. But now prices are really reasonable. The cordate leaves make them useful as foliage plants alone but a mature plant will flower six times a year. Flowers are calla-like, but rather flat, in glossy red, pink, orange, coral, rose and rarely white. They are much used for cut flowers in arrangements and corsages. They are ever-blooming if given correct conditions at all times, but sometimes take a vacation when very hot, very cold or very dry.

Culture. Anthuriums and Spathiphyllums are tender tropical plants, suitable only for pot culture. **Soil formula.** They will grow in most any organic compost. We use and advise one part old osmundine, (discarded from orchid pots, new will do); one part peat. Add enough Sponge Rok or coarse sand to make compost very gritty and to hasten quick drainage. See Potting Directions under General Culture. Add a thin layer of sphagnum on surface to prevent eroding the surface when watering. Set plant low in an oversized pot and as it grows, new roots are formed on compost surface which should be covered with more sphagnum. When compost surface reaches rim of pot, shift to larger pot, or build up with sphagnum. New roots must be kept covered.

Use Spoonit or liquid manure once a month, after plants are well established. The preferred minimum night temp. is 60° or over. 45° does little harm other than to stop growth and flowering. 70° to 80° is a good daytime temp. Air should be very humid. Spraying foliage daily increases air humidity. They should never become completely dry, thruout. Water about every two days.

Shipping. The best way is in pots, by express. But you pay the express and it costs us more to pack. Plants are set back a little by sending by mail, out of pot. But they recover and you save quite a lot on the total cost. Which compensates for the recovery period. If by mail you should add 35c for plants under 8" and 45c for larger sizes for "Special Delivery," also for Insurance fee if desired. They cannot be mailed in cold weather.

Anthurium andraeanum, Shaffer Hybrids are the best. Plants should begin to

flower at 10" to 12" height. We have had 6" plants flower and very often 8" - 10" flower. They grow and multiply so rapidly that we are forced to make sharp cuts in our former prices. They are really bargain prices. If you have a warm living room or a hobby greenhouse, by all means take advantage of these offers. The figure enclosed in parentheses thus (3") is size of pot advised for the plant. **Prices, Assorted Colors**, out of pots, postpaid or established in clay pots, by express, f.o.b. Plants under 4" tall (3" or 4"), \$1.50. 4" - 6", (4"), \$2.00. 6" - 8", (4"), \$2.50. 8" - 10", (5"), \$3.00. 10" - 12", \$3.50. The last should flower very soon. Plants over 12", that have flowered, or will flower very soon, (5" - 6"), \$5.00.

Named Colors, plants that have flowered, our choice, 10" or over, \$5.50. Your choice of color except white, \$6.00. White, \$8.00.

A. crystallinum. A beautiful foliage plant that does not need flowers. Leaves are cordate-ovate to 10" wide and 14" long, deep velvety green, prominently veined white. Pale rose on underside. Blooming sizes \$2.50 and \$3.00. Smaller plants, \$1.50 and \$2.00.

Spathiphyllum Clevelandii. Close relative and formerly classed as an Anthurium. Foliage is oblong and pointed. Flowers are pure white and long, very attractive. They are easy to grow as house plants, in 4" pots. Small plants, \$1.50 and \$2.00. Blooming sizes, often in bloom when sent, \$2.50 and \$3.00. Postpaid or by express, f.o.b.

FANCY LEAF GERANIUMS

Fancy Leaf Geraniums have been having a renaissance of popularity. The gorgeous colors in their foliage surpass belief, until seen.

Culture. The Fancy Leafs are pot plants. The plants we send out are ready for 3" pots. Later, they can be shifted to 4". This size is large enough for a good size plant. Over potting is unfavorable. Use only unglazed clay pots,—no plastics. Do not allow pots to stand in saucers of water. Shade only the first day after potting but not too heavy. Then give almost full sun for about one half day or more, strong light for the balance. If shaded much, stem rot results. Do not keep plants in a soggy condition but keep moist enough to prevent wilt.

All plants need air penetration thru the soil to their roots. Porous pots aid and friable soils are necessary. Geraniums especially, insist on this. The best soil is one that allows water to drain quickly yet retains enough for one or two days supply. Such a soil may be composed of good garden loam one part; peat, shredded or cut sphagnum, fibrous leaf mould, (or a combination) 3 parts; enough coarse sand or Sponge Rok to make the compost quite gritty. Be sure your final compost drains well. We mulch top of soil with sphagnum.

Do not add manure or fertilizer.

When plants are received they will be in waxed paper pots, usually out of 3" pots. You can pot back into 3" or go to a 4" which will soon give you a larger plant. Do not use larger than 4" for geraniums as house plants. Disturb soil as little as possible. If plant is not bushy, pinch out the tip of the main stem. Water at once.

We are often told that plants arrive in excellent to perfect condition but even with expert packing, very often some of the leaves will be lost. They do not like the long dark night without fresh air. If only one or two leaves remain in good condition they are guaranteed to recover if our directions are followed. If no leaves remain, shade them slightly and they usually develop new leaves, especially if lateral buds are showing.

Prices. If our prices are higher than those of another catalog, this is the reason. We make no packing charge. We prepay regular parcel post charges on orders for \$2.00 or over on Geraniums alone. We have bought from most of the other growers and have seen the plants. We send out much larger plants than any we have received. Most growers give no guarantee of safe arrival, but shift responsibility to the carrier. We replace plants that do not arrive in a living condition, if you handle as we advise. But you should send the fees for Insurance, Special Delivery and if wanted for Air Parcel Post. It is advisable to send by air on long distances. Express shipments are usually quite safe and Exp. Co. accepts responsibility.

Alpha. Dwarf. Deeply lobed, golden green leaves with narrow rust zone and large, dark, glowing scarlet fls. \$1.00. Extra large, \$1.25.

Crystal Palace Gem. Yellow green leaves with deeper green central blotch. Scarlet flowers. \$1.00 and \$1.25.

Distinction. Small, round green leaves, toothed on edge, with a sharply outlined dark zone close to edge. Compact small plant. Often first choice of local customers. Cherry fls. \$1.25 and \$1.50.

Jubilee. Bronze yellow leaves with broad rust brown zone. Grows well outside. \$1.00 and \$1.25.

Miss Burdett Coutts. Silvery green leaves bordered with ivory and a zone of brilliant red and brown. Easy to grow and one of the most brilliant in color. \$1.50.

Mrs. Cox. Green leaves edged yellow. The wide zone is brilliantly splashed scarlet, crimson and brown. Very rare. \$2.50.

Mrs. Pollock. Green leaves edged yellow. Wide zone splashed scarlet. Similar but less colorful than Mrs. Cox. \$1.25.

Skies of Italy. Sharply lobed green leaves with wide brown zone, splashed red. Older plants become very colorful. \$1.25 and \$1.50. All prices are for large or extra large plants, not merely rooted cuttings. Postpaid, or by Exp. f.o.b. Guaranteed as stated above.

THE GESNERIA FAMILY—Gesneriaceae

This family includes the following genera: Gloxinia, Saintpaulia, Episcia, Achimenes, Smithiantha, Corytholoma, Isoloma, Streptocarpus, Aeschynanthes, etc. Some of these are listed in our spring catalog.

Gloxinias. We can usually offer a few that will be dormant and ready to ship by late Oct. to Dec. Thus one can gain as much as two months time for early planting as cold weather usually interferes with shipping after Jan. 1. We can offer this fall, only two lots. Lot 1 is the usual 50c varieties and Lot 2 is the usual \$1.00 var. They are ungraded and some will be small tubers. All will be labelled. You may not have your choice as there are too few. They will be "Our Selection." Included will be one lot of a "Fine Florists Strain," not named var., in Lot 2. Sorry, we shall not have time to answer questions about them. There may be duplicates if you order a larger number of varieties than we have, but seldom are two exactly alike anyway and some sorts vary widely.

Prices, Lot 1, 40c ea. Lot 2, 75c ea. You may have the dozen rate on 6 of either lot altho each will be separately labelled. This means 6 for the price of 5.

Unlabelled tubers, our selection, \$3.60 per doz.

Customers in Los Angeles area. If you call we can sell you the potted plants now. These are in right soil and can be left in the same pot for next year. Some of our plants are a little leggy due to crowding or too much shade.

Gloxinia Seed, saved from named varieties, mixed. Seedlings flower in about 5 mo. 50c per packet. Seed of **Antonelli Hybrids**, very small packet of at least 10 seeds, 50c.

Culture. Place fine grained vermiculite or terralite in the bottom of a plastic refrigerator dish $\frac{3}{4}$ " deep and moisten well. Plant seed very thinly over surface. Keep covered with lid until plants are ready to pick out. One must make sure that moisture does not escape and add water if it does. They may be picked out and transplanted into 2" pots after second pair of leaves develop. We also plant seed in 9" pans, half filled with peat and milled sphagnum. When planted cover pot with glass. We grow many rare seeds by either method, including African Violets.

Episcias have gorgeously colored foliage. They are very tender tropicals and should not be colder than 60°. At about 50° they are badly damaged or killed, hence cannot be shipped when likely to encounter temperatures under 50°. They make stolens or runners like a strawberry and new plants are made in a similar manner. We plant in baskets of sphagnum and hair pin the little plants on stolens to sides and bottom of basket.

Or stolens may be allowed to hang as jewelled pendants. Flowers are usually bright scarlet and foliage usually villous, or hairy and velvet like. When your plants arrive the roots will be in a lump of sphagnum moss. Do not remove this or roots will be injured.

Episcia chontalensis, a small variety with green leaves. Fls. lilac or white. \$1.00. **E. Coccinea**, so called in the trade but probably is *E. cupreata*. Brownish, hairy leaves, silvery veined, scarlet fls. \$1.00. (This was widely advertised as a Flame Violet. *Episcias* are not as closely related to *Saintpaulias* as they are to *Aeschynanthes* and *Columnnea*. I doubt if hybrids can be made.) **E. cupreata**, var. **Silver Sheen**. A broad silver sheen in center with dark green border. Fls. scarlet. \$1.00. **E. lilacina**, bronze leaves, \$1.00. **E. splendens**, large, bright green leaves, broad veins of silver green. Scarlet fls. A very lovely variety. \$1.25. **E. Sport** is the label under which we received it. We have grown a few thousand *Episcias* but have never seen one sport. This is probably an unidentified species. Fls. close to yellow. 75c. Collection of 6 var. for \$5.50. Order early this fall, before Nov. 1, to north. They cannot be shipped in cold weather. They "freeze" at about 50°.

Aeschynanthes pulchra is now the valid name for the former *Trichosporum pulchrum*. The authority is *Gentes Herbarum*, Cornell University publication. Fortunately, amid the vicissitudes of nomenclature changes, the plants remain unchanged. This is a nice trailing, almost woody vine. In nature, they are said to be epiphytal and to climb trees. If they do, I envy the monkeys in those trees as the plants are attractive and the freely produced large flowers are tubular and vividly colored.

They are tender tropicals and shipment will be made only when weather permits. We grow them in 8" and 10" wire baskets, lined thickly with sphagnum and with peat and sand in center. They can be grown in pure sphagnum. They do not do as well for us in pots. Most of ours are nearly thru flowering. We will ship plants that have not yet flowered as long as possible. I am not sure that they will still flower. They are now very large plants. They are beautiful at all times and when in flower they are gorgeous. Price \$3.75, express f.o.b.

Columnneas are mostly epiphytic climbing vines. We have no large plants to offer but have about 12 small *C. microphylla* and 12 *C. gloriosa* in 8" baskets for \$2.50 ea., f.o.b. express. Loose roots for \$2.25 ea. postpaid.

Streptocarpus are very close relatives of *Gloxinias* but are fibrous rooted evergreen and can only be moved as growing plants. The culture is much the same except as to temperature. They thrive in a cool house and are easily grown in a lath house in summer. The color range is similar. The flowers are smaller and freely produced. They are followed by long twisted seed pods, hence their name. They are easily grown from seed, which save, as we have no seed for sale. It is not safe to ship to north after Nov. 15. \$1.00 ea.

Culture of the listed Gesneriaceae. All listed this fall are tropical or semitropical shade plants. All except *Streptocarpus* should have a minimum night temperature of 60°. 70° is better. The day temp. should be 70° to 80°. Altho shade plants, they need strong light and *Gloxinias* need some early morning and late afternoon sun or partial sun all day. Otherwise the plants become leggy and unsightly. If given too much sun leaves become convex on top. All must have good drainage and be kept moist. Drying out may result in failure, dropping of buds or even leaves. Water on the foliage does not injure it or cause spots if they dry off before the sun touches the foliage, even lightly. *Gloxinia*, *Episcia* and *Saintpaulia* leaves spot easily if wet when touched by sun. All plants of this family can be grown in living rooms, under conditions comfortable to *Saintpaulias*,—and other human beings.

AFRICAN VIOLETS—*Saintpaulias*

The latter is the correct botanical name. They are the most popular of all house plants at the present time and they are likely to retain this eminent position in popular favor indefinitely, as they deserve it.

Saintpaulias were discovered by Baron von Saint Paul, who sent seed to Europe where they first flowered in 1893. They are natives of the Usambara district of Tanganyika, equatorial east Africa. Tanganyika includes Lake Victoria, source of the Nile, on the north and extends 12° south. It is entirely in the tropical zone. It is always summer, with almost no variation or seasonal changes in the climate. Due to the hot Indian Ocean on the east, the humidity is high.

The mean average temperature at lower elevations is 80° with little variation on either side. It is a "mean" temperature for the white races and few live there. At higher elevations the mean average is about 70°, which is not uncomfortable, but monotonous.

Culture of Saintpaulias. Climate and soil conditions in the habitat of a plant supply a good starting point for the discovery of their proper cultivation. Plants possess a variable degree of tolerance and adaptability. Often a plant or an animal, transplanted to new conditions, does better in the wild or under culture in the new situation. For example, rabbits in Australia, the English Sparrow in America and Cactus in Africa appear to have gained by transplantation.

African Violets under the hand of man have been vastly improved and many new colors and forms have been produced. Grotei, the climbing African Violet, and other new species have been discovered. They have also adapted themselves to somewhat different conditions. They are strictly house plants only.

The advised **range of temperatures** for winter is 60° at night and 70° daytime. They might do a little better at 10° higher but that is uncomfortable for people in winter clothing and summer brings about 10° increase, in our living rooms.

The plants do not like sudden changes nor great changes. A nearly even temperature, within a limit of 12° between high and low is better. They are bound to have a greater range sometimes and if not more than about 15°, they are unlikely to lose their flowers. Loss of flowers is the first evidence of something wrong. This may result from sudden changes, drafts, too high a temperature in summer and in winter it may result if temperature goes much under 60° for more than an hour or two.

African Violets grown at a congenial temperature are usually killed if subjected to lower than 40°. Therefore it is impossible for us to send you plants by mail in winter, to a cold climate. In favorable weather we can usually send to warmer sections of the south. Express is safer. Nor do we ship on very hot days in summer. We plan to ship so that they do not arrive to you on a week end and thus remain in a carton a day or two longer.

Watering. Do not use cold water. The water should be near the room temperature and never over 10° lower or higher. Most of our watering is done by spraying with a hose. The plants need to have the foliage sprayed and it does not spot the foliage if no sun falls on the foliage before they dry off. The interval between waterings should be long enough to permit the top soil to become slightly dry.

Good **ventilation** is needed by all plants but Saintpaulias do not like drafts. Slow movement of air currents are more conducive to their comfort.

Soil formulae. Plants have a considerable tolerance and do well in a wide variety of soils. They should be at least mildly acid in reaction and a type that will drain easily and quickly. Heavy clay soils, therefore, are not good.

We use about one half oak or redwood leaf mold and one half sandy loam or good loose garden loam. To this is added enough Sponge Rok or coarse sand to make the soil gritty and aid drainage. Fine screened peat is as good or better than leaf mold.

We list Black Magic under Supplies. We have tried this and can recommend it. It is not only a good growing medium for African Violets, but for all the Gesneriaceae and most shade plants that need acid soils.

Fertilizers. We use only Spoonit and recommend it to be applied once a month, on a day following watering. See our listing under Garden Supplies.

Sun exposure. Most of the advice one receives over-emphasizes shade. Lack of sufficient light intensity is one of the most frequent causes of non-blooming. All shade plants need a certain amount of modified sunlight to make them flower. In the winter, the sun is at a low declination. Its rays must pass thru several times the thickness of

atmosphere penetrated at noon in the summer when the sun is directly above or at "high declination." Very little shading is needed on the greenhouse in winter. Treated thus, our plants bloom profusely all winter. Very likely, plants in a south window, anywhere in the north temperate zone, in winters, will be sufficiently shaded on the brightest days by a thin muslin curtain. It may not even be needed at all and on days of less than maximum intensity remove the shade.

But summer sun is much stronger. One must give more shade. It should not, however, be too heavy. The color of the foliage will tell you what they can endure. When healthy plants have light, yellowish foliage they probably receive too much sun. Medium green is about right. Very dark green foliage indicates insufficient light and lack of flowers corroborates it. For checking, select a plant having green foliage, under normal conditions, not a dark foliage plant like Holly or Pink Delight nor one like Frosty having ivory or white areas.

If your Saintpaulias do not flower altho they grow well and appear to be healthy, you need to check on all points we have mentioned. Light intensity and duration are important. In the far north we have customers near the Arctic Circle where there is full daylight only in summer. Here the only possibility of winter flowers is the use of artificial light. They express interest in fluorescent lighting. Mrs. Rector, in How To Grow African Violets (which you should have,—see our book list), says that an 80 watt fixture, 18" above the soil, has been found to give good growth and free flowering. Greenhouse growers who force lilies for Easter are able to advance the blooming date by the use of electric light. Any kind of light will do provided the plants receive 15 to 30 foot candles (as measured by a photographic light meter) for 12 hours duration, daily. This should be tried in the northern states where winter days are short and dull.

Humidity. The humidity of our houses is likely to be not much over 25%. One can increase the humidity around the plants sufficiently by setting the plants in saucers or in a long tray that will hold several pots. A chick feeder with guards removed makes a good tray. These may be partly filled with small gravel. Set pots on top of gravel and pour in water until it does not quite touch pots.

Pests. Be sure to keep your plants free of insect pests. One of the most common on house plants is the **mealy bug**. Examine plants frequently for pests. Mealy bugs look like tiny specks of cotton. One way to remove and kill them is to use a bit of cotton on the end of a toothpick. Dip the cotton in alcohol and pick off the bugs. Do not touch foliage with the alcohol. Wonder Garden Spray, used as a spray is effective. A badly infested plant should be discarded or at least removed from vicinity of all other house plants. All effective insecticides are poisonous. You must not breathe the fumes. You must avoid skin contact. See our listing.

Cyclamen mites are most destructive. The center of an infected plant takes on an abnormal appearance and changes to a different color, usually grey. It becomes rough in appearance and young foliage is misshaped. Mite spreads to all the plants and effective measures must be at once applied. We have found the most effective remedy is to spray with Wonder Garden Spray, which is listed under "Supplies." Immediately remove infected plants into quarantine. Do not handle infected plants, then healthy plants.

Customers are invited to visit our nursery when in Los Angeles area. Drive east on Garvey, N. on Azusa, E. on Arrow Hwy. to Esther St., S. one block, or take La Verne bus. Get off 2nd street east of Bonita High School.

Distant states, Hawaii, Alaska, Cuba, Europe, etc., should include enough for delivery by Air Parcel Post. We have shipped as far as Denmark, nearly 6,000 miles, this way and plants arrived in almost perfect condition. They did not quit blooming. We ship every week to Hawaii, frequently to Cen. America, Mex., Bermuda, Cuba and other West Indies, Alaska and even to the Philippines. These must go by air mail. We charge the customer the excess of Air Parcel Post above the cost to our 8th postal zone. Please state in your order that you will pay the difference promptly if your estimate is too low. But send your estimated amount with order.

We usually succeed in delivering plants in excellent to perfect condition. We guarantee our plants to arrive in a living condition.

Our New Introductions

To be released about April 1954. We have the exclusive introduction of the following varieties originated by Mrs. Carolyn Rector: **Caracol**, **Pacific Shadows**, **Narbonne**, **New Dawn**. Each will sell for \$2.50. We expect to start shipping these about April. We will also have **Silver Moon**, a beautiful white, at the same price. They may be ordered in advance if desired.

The following are ready now:

Easter Bunny (Hendrix). Dwarf. Very small girl leaves. \$2.00.

Fairy Queen (Hendrix). Dupont type lvs., fls. very lg. Light hortense violet. Violet-purple eye and edge. \$2.00.

Los Angeles Dbl. Lovely hortense violet flowers. \$2.50.

Morning Dawn. Grotei hyb. Fls. pale violet with light violet eye. \$2.00.

Morning Mists. Grotei hyb. Fls. pale mauve, light mauve eye. \$2.00.

Temple Belle (Hendrix). Fls. violet blue with white border. Flexible girl foliage. \$2.00.

General List

R. following the name indicates the plant is registered with the African Violet Society of America.

Azure Beauty Improved. Beautiful double fls. white with lav. or blue markings. \$2.00.

Blue Heiress. R. Dupont. Brilliant blue fls., girl-type foliage. \$1.50.

Blue Lady. R. (Hendrix). Large light blue flowers. \$1.50.

Blue Ohio. Very large dark blue fls., lvs. heavy but small. \$2.00.

Bronze Girl. R. Very lovely girl foliage. Fls. reddish. \$1.00.

Carmen. R. One of the best reds. \$1.75.

Corsage. New. Large light blue double flowers. \$2.50. Sm. plants \$1.00.

Delight. Double. Medium blue flowers. \$1.50.

Diplotricha supreme, species. \$1.50.

Double Blue Warrior. Flowers blue-violet. \$1.50.

Dbl. Fringed White. \$2.50. This will be delivered when available.

Dbl. Orchid Girl. R. Lovely girl foliage with beautiful orchid fls. \$1.50.

Dream Girl. New. Variegated. White bordered with blue. Lovely foliage. Very popular at the greenhouse. \$2.50.

Evening Sunset. R. A light blue, with an overcast of pink that predominates in the upper two petals, like sunset and blue sky. \$2.50. Sm. \$1.00.

Fantasy. R. Lavender, variegated and spotted flowers. \$1.25.

Frilled Blue Delight. The petals are frilled. White edged with blue. Sm. \$1.00.

Frosty. New. Variegated foliage. A mound of snow spilling from a green salver. \$2.50.

Geneva Beauty. Excellent new variety. Purple flowers with white edge. Does not fade. \$2.50.

Grotei. Species. Climbing Saintpaulia. \$1.50.

Helen Wilson Bouquet. R. Double. Wine red flowers. Girl foliage. \$1.50.

Holly. (Keller). Lvs. are dark copper green, Holly shaped, purple underneath. Sm. \$1.00.

Indianola. Fls. bi-color. Very dark green foliage with red under side. \$2.00.

Innocence. White. Very pretty foliage, red underneath. \$1.50.

Inspiration. (Violet Beauty Supreme). Very large blue-lav. fls. \$1.75.

Juno. R. (Hendrix). Lg. fls., lilac with violet top petals. Large lvs. \$1.25.

Lacy Girl. Dark purple, fringed petals, almost perfectly round. \$1.50.

Minuet Girl. New. Minuet blue. Lovely girl foliage. \$2.00.

Navy Bouquet. R. Dark blue double. Profuse bloomer, crinkled leaf. \$1.50.

Orchid Velvet. R. Very lg. fls., free flowering. Dupont lvs. \$1.50.

- Painted Ballerina.** R. Red-violet bicolor. Girl foliage. \$1.50.
- Painted Girl.** R. Snowy white, glistening as if covered by diamond dust, bordered by orchid. The flowers are perfect gems. Very popular. \$2.25. Sm. \$1.00.
- Pink Attraction.** New. Lovely large round flowers with rosy eye. Good foliage. \$2.50.
- Pink Cheer.** R. Deep pink flowers. Plants rather sm. \$2.00.
- Pink Delight.** R. Light pink flowers. Dark foliage. \$1.50.
- Pink Fantasy.** Pink flowers, shaded an intense cerise-red in throat. \$1.50.
- Pink Shocking.** Very large deep pink flowers rather long in shape. \$2.50.
- Pink Wonder.** Patented. Long looked for pink. Lovely, large round flowers, deep pink. Dark eye. \$3.00.
- Purple Knight.** Excellent large, free flowering. Bluish purple. \$1.75.
- Purple Lace.** Dark purple, fringed flowers. \$2.00.
- Purity.** R. Dbl. white. \$1.50.
- Red Girl.** Beautiful girl foliage. \$1.50.
- Red Princess.** An outstanding red. Crimson wine red. \$2.50.
- Rose Rainbow.** Double. R. Rose and white variegated. Very desirable. \$1.50.
- Royal Ripples.** R. Dark blue ruffled fls. Beautiful ruffled foliage. \$1.50.
- Ruby Bouquet.** R. Dbl. Vivid ruby wine color, glossy dark green leaf. \$1.50.
- Ruffled Beauty.** Ruffled girl foliage with deeply serrated edges. \$1.25.
- Ruffled Queen.** R. Color blue burgundy, with ruffled, frilled petals. Very popular variety. \$2.50.
- Sea Girl.** Double. Medium blue, girl foliage. \$1.25.
- Sherry Girl.** Beautiful dark green girl foliage. Blue fls. well above plant. \$1.25.
- Snow Prince.** R. Very large flowers in abundance. One of best. \$1.50.
- Trumpet Girl** (Hendrix). Dwarf. Beautiful girl foliage. Lav. fls. \$1.50.
- Twilight.** R. Variegated blue and white fls. Very large and beautiful. \$2.00. Sm. \$1.00.
- Tongwensis.** Species. A jewel. The very glossy leaves make the plant especially attractive. \$1.50.
- Western Girl.** (Rector). Fls. Dauphin's violet. Lovely foliage. Good bloomer. \$1.25.
- Special.** Our selection one plant \$1.00, 2 for \$1.75, 3 for \$2.50, 5 for \$4.00. A very good plan if you want to start a new collection.
- African Violet leaves.** 35c ea. 3 for \$1.00. 12 for \$3.00. Over 12 lvs. 25c ea.
- | | | |
|----------------------|----------------------|---------------------|
| America | Evening Star | Orchid Wonder |
| Amethyst | Fairy Boats | Painted Ballerina |
| Apollo | Frieda | Perfection (Dwarf) |
| Apple Blossom | Gauche | Pink Lustre |
| Baby Blue Eyes | Geneva Star | Pink Queen |
| Behnke Boy | Gypsy Alma Girl | Poncho |
| Bi-Color | Gypsy Apple Blossom | Portland Rose |
| Black Beauty | Gypsy Ice Girl | Purple Dawn |
| Blue Butterfly | Gypsy Jewel | Queen Betty |
| Blue Charm | Gypsy King | Red Edged White Boy |
| Blue Jewel | Gypsy Lace | Red Moire |
| Blue Moire | Gypsy Prince | Rose Crinkles |
| Blushing Maiden Sup. | Gypsy Princess | Rose Marie |
| Bronze Bicolor | Gypsy Queen | Rosebud, dbl. |
| Bronze Girl | Heart's Delight | Royal Ripples |
| Bugle Girl (Dwarf) | Helen Wilson Bouquet | Royal Girl |
| Charro | Ionantha Grandiflora | Ruffles |
| Christina | Lacy Girl | Saffron Red Boy |
| Dainty Maid | Lady Loreta | Sapphire |
| Dbl. Blue Warrior | Marine | Sherry Girl |
| Dupont Lav. Pink | Maroon | Spoon Girl |
| Dupont 1; 2; 4 | Moro | Supreta |
| Evelyn Banks (Pink) | Opal Girl | Velvet Glow |

Violette Elf.
Western Sunset
Western Girl

White King
White Supreme

Wine Velvet
Yellow Brown Girl

THE ORCHID FAMILY—Orchidaceae

Cymbidiums and Cypripediums are easily grown in living rooms if humidity is increased by a method as we have advised for African Violets.

Cymbidiums are very useful for corsage flowers. We can supply the following, **Butterfly**, cream to tan; **Doreen**, greenish bronze; **Giganteum**, red-brown; **Moira**, greenish bronze, barred rose; **Winter Cheer**, bronze and deep rose. Price \$2.50 per front bulb with foliage. **Madeline**, deep pink, \$5.00; **Hookerianum**, olive green, \$7.50. **Assorted varieties**, unlabelled, \$2.00.

How To Grow Cymbidiums is told in our "How To Grow Orchids," a 10 p. pamphlet. Send 25c for it.

We ship Cymbidiums, loose roots and out of pot only. By Express, f.o.b. Potted Cymbidiums do not travel well unless in an expensive crate. If you want them to come by mail, send 75c extra for extra heavy packing material and for postage. We ship by mail at your risk only so you better have them insured.

Cypripediums, for short, as they resemble our native Lady Slipper, Cypripedium. The correct botanical name is Paphiopedilum. These should be potted in osmundine or osmundine and sphagnum. They do very well in sphagnum moss or peat, with a little sharp sand. Pot just deep enough to cover the roots well, but no deeper. Keep moist and shaded. They are tropicals and best night temperature is about 55°. Daytime, 65°. They will do rather well at 10° lower which only slows them down. They require deeper shade than Cattleyas.

Cyp. Callosum. Foliage marked. Fls. large, variable. Dorsal sepal, white, shaded green at base, often flushed with crimson. Petals with rose purple markings. Flowers spring to summer. \$6.50 ea. Express, f.o.b. If you are experienced we will send out of pot, postpaid, for \$7.00, but with no guarantee for safe delivery or for growth. You must have 4" or 5" pot and the potting material. It is far better to have them sent in the pots by express.

Cattleyas. We still have a few recently repotted Orchids, hybrids and the finer species. **C. Enid**, \$7.50 ea. **Our selection** hybrids and better species, \$5.00 ea. Tell us what you have and we will not duplicate.

For culture you should have "How To Grow Orchids," 25c, and our 1949 Price List, price 15c, giving instructions for growing Cattleyas. See our book list for books on orchids.

Osmundine for potting orchids, \$1.35 lb., postpaid.

Bletilla hyacintha. Lovely hardy, terrestrial orchid. Corms should be planted about Nov. when dormant. The best soil contains much sand and peat. 8 to 12 lovely little purple orchids on a scape 15" tall. Price 60c.

MISCELLANEOUS

Anemones and Ranunculus. Ranunculaceae. **Anemones** are mostly blue but some are red, pink or white. The flowers of this strain are mostly single which we prefer in Anemones.

Ranunculus range in color from red, pink, yellow to white. This strain produces the largest and most double flowers.

Tecolote Ranunculus and Anemones, large size for growing in pots or in the garden. This size gives larger fls. on taller scapes and forces well in pots. Price, either Ranunculus or Anemones, 2 for 15c. 50c doz.

Culture. Hardy only in deep south. It is best to start after summer heat has gone,—in mild autumn weather. They can be started here in a flat of moist sphagnum moss, or sand in the cool shade of a tree. Don't forget to keep them moist. Transplant

to garden in deep south or to pots in north. You can start them or grow them in a cool room in the house in winter. They should have sandy soil with peat added.

Ctenanthe oppenheimiana, var. tricolor. Marantaceae. A beautifully colored foliage plant. The foliage is striped light and dark green on upper surface with a few white stripes and blotches. The under side is maroon. Grow in 5" pots, acid soil,—peat or sphagnum with sand. We will ship, out of pot, postpaid, for \$1.50, or in clay pots, by express, f.o.b., for \$1.50.

Maranta Kerchoveana. Rabbit Tracks. Nice, easy-to-grow shade plants, for pots. Acid soil. 75c.

THE PINEAPPLE FAMILY—Bromeliaceae

Bromeliads include Billbergia, Aregelia, Aechmea and many other genera.

Billbergias are most unusual and fascinating plants. Not only are the flowers in intriguing pastel shades but the floral display is made brilliant by the large vividly colored bracts that cover the scape. The leaves form a rosette and are more or less rigid. Some have brightly colored leaves and others are often mottled, striped or barred. All are desirable foliage plants.

How to Grow Billbergias. All are tropical or semitropical epiphytes and thus are hardy in outdoor gardens only in the deep south. But they are all easy to grow in pots and add distinction as well as beauty to the window garden.

In pots, they should have a soil of $\frac{1}{4}$ sand or sandy loam and $\frac{3}{4}$ peat, or leaf mould. There should be plenty of drainage material in the pot as poor drainage may soon destroy them. Do not overwater when first planted or in winter when semi-dormant. Nor should they become dry enough to shrivel the foliage. In hot weather when they are growing well, water liberally. Keep a drink of water in their cups in the center.

In the outdoor garden they should have the same soil as recommended for pots. A few, like "nutans," will grow in nearly any soil but will do much better in the type recommended. They do well on the trunks of Palms.

They need about half shade. Too much sun will burn and finally destroy the foliage. Those species and varieties having highly colored foliage do not develop their rich colors when too deeply shaded. Most of our plants are grown in a well shaded Clivia house. When well established and growing, richer colors may be brought out by giving a little more sun than we do. **Culture** of Aechmea and Aregelia is the same.

Aechmea calyculata. Bright green leaves, yellow fls. \$2.00.

Aregelia spectabilis. Bronze foliage, barred grey green on back. \$3.00.

Billbergia Burkholtzi. Tall, slender, erect green leaves. Rose bracts, lavender fls. \$2.00.

B. distachia. Long, reddish green lvs., spotted cream. Rose bracts, blue and green fls. 50c.

B. nutans. Mid-winter, beautiful inflorescence on small plants. Fine pot plant. 50c.

B. nutans x Cryptanthus acaulis. Highly colored, bronze and green leaves. Compact plant. \$1.50.

B. pyramidalis. Wide green lvs. Red fls. tipped violet, red bracts. \$2.00.

B. rubro-cyanea. Most colorful foliage, red and green spotted cream. Green fls. edged blue. Crimson bracts. \$1.00.

B. speciosa. Green lvs., striped on back. Green fls., tipped blue. Rose bracts. \$2.00.

B. Theodore L. Meade. Green lvs. and large, beautiful inflorescence, continuous all year on new ground. \$1.50.

B. thrysiflora (pyramidalis x amoena). Finest hybrid. Beautiful inflorescence. \$1.50.

B. Zebrina. Lvs., banded white on back. Salmon bracts, green fls. \$1.50.

Collection all 12 varieties, value \$19.00. Express, f.o.b., \$16.50. By this method we can send larger plants. By mail, postpaid \$17.50.

Big 4 Collection. Nutans, Distachia, Rubro-cyanea and Zebrina. Value \$3.50. Price \$2.75. Include Special Handling for these plants by mail.